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## Educational News and Editorial Comment

CHARLES ERNEST CHADSEY

On April 9, 1930, occurred the death of Charles Ernest Chadsey, dean of the College of Education of the University of Illinois. Dr. Chadsey had come to the deanship in 1919. An annual event during the summer session at the University is the "All-education dinner." In connection with the affair for this year, which was held on July 22, special tribute was paid to the memory of Dean Chadsey. The tribute was prepared and presented by Professor A. B. Mays, a colleague, and is here reproduced in full. The many readers of the *School Review* who knew the late Dean Chadsey will confirm the sentiments so well expressed by Professor Mays.

On this occasion, the first "All-education dinner" of a summer session since the passing on of our much loved Dean Chadsey, I am sure many here this evening have been thinking of him and have experienced the feelings of loss and sadness that come to all his friends and admirers when his untimely death is brought to mind. He regarded this gathering of school men as an important event in the school year and seemed always to enjoy its fellowship and good cheer. It is fitting that we pause, therefore, and think together for a few moments of our leader and companion who has left us.

Dean Chadsey possessed, in unusual degree, those qualities which command admiration and genuine affection. He was essentially a man's man. He met life in a man's way. He was tolerant in his judgments of other men and always fair

in his actions. He was not strictly just, for he could never refrain from diluting justice with mercy. Some of us near him have often smiled when he has told us what he felt he must do as an executive officer in bringing to strict account some delinquent student or staff subordinate; for we knew that, when the point of administering reproof was reached, his incurable sympathy and kindness would triumph and exact justice would not be executed. This was one of his most endearing traits.

He was a man of amazing breadth of interests, and his interest in any subject always had a youthful tone that was most pleasing to his friends. Whether it was football or philosophy, student conduct or international relations, he would exhibit all the keen interest of the young man just tasting life for the first time; but his conclusions were those of the educated mind that has spent much time in thought.

From the time he came to the University to become the first dean of its newly-created College of Education, Dean Chadsey's life seemed to center in the development of the college. He thought of it as the state's great agency of service to the public schools; and, in the face of almost insuperable obstacles, he led the little, struggling organization of eleven years ago to the position it now holds as one of the major professional colleges of the University. Few men could have matched that achievement in the face of the heart-breaking experiences through which he was forced to pass for the sake of his college's success. When he died, he was in the midst of plans for yet greater development of the College of Education under the leadership of our new president.

His most striking quality, however—the one which made him most attractive to us—was his unaffected interest in people. A student with a problem never failed to get a sympathetic hearing and real help. He would seem to forget a desk filled with work and give himself wholly, for the time being, to the student's trouble. He seemed instantly to identify himself with the troubled one, and I have seen him, more than once, thoroughly indignant over what he felt was an injustice to some young man or young woman who went to him for advice. Few things touched him so promptly and deeply as did the troubles of a young person. And what an interest he took in the problems which you principals and superintendents brought to him! He would say to me sometimes when I chanced to be in his office: "What would you do in this case?" Then he would recite in most entertaining fashion an administrative problem that one of you had presented to him, and, with all the pride of the man who through genuine achievement has come to be sure of himself, he would say, "Now, this is what he ought to do." And there would follow a most enthusiastic recitation of the soundest possible administrative wisdom. The enthusiasm and youthful spirit he exhibited in his work was always remarkable. When I remembered that he had since young manhood held only the most important administrative positions in the American schools, that he had for many years been a recognized leader in the educational world and had held the highest positions of honor and influence in the gift of the public-school men of America, I marveled at his

never-failing youthfulness of spirit and his zestful interest in the problems of even the most obscure school executive who went to him for help.

It was in times of personal distress that we came to know his bigness of heart the best. When sickness or death came into the homes of the members of his staff, he seemed to feel that the anxiety and sorrow belonged also to him. His interest was intense and often depressing to him. During a recent rather serious sickness in my home, when I was most anxious, he told me that for a time he was afraid to ask about the outcome. That expression of his showed his quality of identifying himself with the troubles of his fellows better than any words I can combine.

Of course we miss such a man! He was a remarkably successful administrator. He had a record of which any man might well be proud, but it was the unfailing humanity of Dean Chadsey that endeared him to all of us.

America has lost one of her really great educational leaders, known, followed, and admired throughout the nation. The state of Illinois has lost a most influential and constructive force in the development of her educational system and an outstanding authority on public-school administration. The University has lost one of its ablest administrative officials, and the students one of their most sympathetic counselors. The College of Education has lost its first dean, its wise, farseeing guide and head. You and I have lost—our friend.

#### CURRICULUM-MAKING FOR THE HIGH SCHOOLS OF IOWA

The first of the *Courses of Study for High Schools* being issued by the Department of Public Instruction of Iowa (Agnes Samuelson, superintendent) have made their appearance. These courses are being prepared by the Iowa High School Course of Study Commission appointed, presumably, by the state superintendent. Directing the activities of this commission is an executive committee of seven members, of which Professor Thomas J. Kirby, of the State University of Iowa, is chairman. The actual work of preparation is carried on by committees for each of the main subject groups. For example, there is a committee on science, which includes twenty-six members. This large committee, which has a general chairman, is made up of subcommittees on biology, general science, physics, and chemistry. Members of the commission and the committees include presidents of colleges, professors of education, principals, superintendents, and heads of departments and teachers in high schools and colleges. Quite properly the teachers outnumber other educational workers in the membership of these committees. The diversity of types of educational workers and their wide geographic distribution within

the state emphasize the essentially co-operative character of the enterprise and should have the effect of increasing the use of the outlines being prepared.

Essential uniformity in the construction of the course-of-study outlines is being achieved by common use by the committees of a leaflet, "Organization of a Course of Study," prepared by Professor Kirby. This is too long to be reproduced here, but some idea of its salient features may be gained from the following excerpts from the General Introduction prepared by him for the entire series of *Courses of Study for High Schools*.

At the first general meeting of the various subject committees a suggestive pattern for the courses of study, embodying the fundamental needs for teaching, was projected. Four crucial factors that should be emphasized in any course of study to make it an instrument that would cause teachers to consult it for guidance in the performance of their daily work were set forth as follows: objectives, teacher procedures, pupil activities, and evidences of mastery.

*Objectives.*—The meaning of objectives as here used is those concepts which are set up for pupils to achieve. As used in current practice, there is a hierarchy of objectives as shown by the fact that we have objectives of general education, objectives for various units of our educational system such as those proposed by the committee on cardinal principles, objectives for subjects, objectives for a unit of instruction, and objectives for a single lesson. In each level of this hierarchy of objectives a constant element is expressed or implied in the form of knowledge, a habit, an attitude, or a skill which pupils are expected to acquire.

In the entire field of secondary education no greater problem confronts us than that of determining what these fundamental achievements are to be. What shall be the source of those objectives is a problem of too great proportions for discussion here, but it is a problem that each committee must face in the construction of a course of study. A varying consideration of objectives by the various committees is evident in the courses of study they have prepared. The value of the courses varies in terms of the objectives that have been set up, according to the value of the objective in social life, according to the type of mental techniques which they stimulate and exercise, and according to the objectivity of their statement.

*Pupil activities.*—In our educational science we are attaching increasing significance to self-activity on the part of the learner. Recognition is made of the fundamental principle that only through their own activity pupils learn and that the teacher's rôle is to stimulate and direct this activity. No more important problem faces the curriculum-maker than that of discovering those fundamental activities by which pupils learn. In a well-organized course of study, that series of activities, in doing which pupils will attain the objectives set up, must be provided. These activities must not be chosen in a random fashion,

but care must be taken that appropriate activities for the attainment of each objective are provided.

*Teacher procedures.*—With the objectives determined and the activities by which pupils learn agreed upon, the function of the teacher in the pupil's learning process must be considered. In a course of study there should appear those teacher procedures of known value which make learning desirable, economical, and permanent. Here our educational science has much to offer. Where research has demonstrated with a high degree of certitude that a given technique is more effective in the learning process than others, this technique should be included in a course of study. Common teaching errors with suggested procedures to replace them may be included. Pupil difficulties which have been discovered through research should be mentioned, and methods of proved value for meeting these difficulties should be included. Suggested ways of utilizing pupils' experiences should be made. And as important as any other feature is the problem of motivating learning. Whatever our educational research has revealed that stimulates the desires of pupils to learn should be made available in a course of study. Valuable types of testing should be incorporated as well as effective type assignment. The significance of verbal illustrations as evidence of comprehending the principle at issue should be featured as a procedure. Where there is a controlling procedure of recognized value such as is recognized in general science—bringing the pupil into direct contact with the phenomena studied—forceful effort for the operation of this procedure should be made.

*Evidences of mastery.*—What are to be the evidences of mastery of the objectives set up? There are all degrees of mastery from the *memoriter* repetition of meaningless terms to a rationalized comprehension that shows grasp of both the controlling principles involved and the basic facts necessary to a clear presentation of the principles. These evidences of mastery may be in the form of dates to be known, formulas to be able to use, types of problems to be able to solve, quality of composition to produce, organization of materials to be made, floor talks to be able to give, papers to be able to write. . . .

While these four elements constitute the basic pattern, the principle of continuity from objective to pupil activity, to teacher procedure, to evidence of mastery was stressed. The maker of a course of study must bear in mind that what is needed is an objective having accepted value; a pupil activity, in performing which pupils gain a comprehension of the objective that is now being considered; that a teacher procedure is needed which evidence has shown is best adapted to stimulating pupils to acquire this objective for which they are striving; and that evidences of mastery must be incorporated into the course by which to test the degree of comprehension of the objective now being considered.

A PUBLICATION AND CONFERENCE ON THE UNIT  
PLAN IN TEACHING

The Virginia Committee on Research in Secondary Education, of which W. R. Smithey, of the University of Virginia, is chairman,

has been studying applications of the unit method of teaching in a number of different subject fields. Some of the results of experiences with this method are reported in papers published in *The Unit Method of Teaching* (Secondary Education in Virginia, No. 9. University of Virginia Record Extension Series, Vol. XIV, No. 9). This monograph is the second of the series to deal with this method, an earlier one, *The Unit Assignment* (Secondary Education in Virginia, No. 5. University of Virginia Record Extension Series, Vol. XIII, No. 8), having been published approximately a year previously. The present number contains two papers somewhat general in character and four papers dealing with certain subject fields. The general papers include a discussion of the unit plan as a basis for the practice of teaching in the secondary school by E. E. Windes and a statement of the procedures in applying the plan in the high schools of one county by R. Claude Graham. The discussion of the subject fields includes papers on English by Edward Alvey, Jr.; mathematics, by R. C. Wingfield; social science, by R. E. Swindler; and science, by O. G. Fitzhugh.

The same committee held a conference at its fourth annual meeting on August 7 and 8, 1930. The general topic discussed at this conference was "The Unit Method of Teaching in Secondary Schools." At this meeting the papers already referred to and additional papers on the same general topic were presented and discussed.

#### A BASIC LIST FOR THE SENIOR HIGH SCHOOL LIBRARY

The American Library Association has recently published a pamphlet entitled *500 Books for the Senior High School Library*. Compilation of the list of books is credited to Meta Schmidt. The Preface states that the list "represents the work of many school librarians" and describes briefly the procedure in compilation. Under the leadership of Frances Kelly, chairman of a committee of the association, five school librarians "made a careful study of the five hundred titles they would consider essential in a first purchase for a senior high school library." When the frequency of recurrence of titles in these five original lists was studied, the lists were found to be exceedingly diverse. "There were only 35 titles

submitted by all five librarians, 110 by four, 139 by three, 256 by two. The titles submitted by only one were, on the other hand, very numerous. It seemed best, then, to submit the frequency list to a larger group of school librarians to obtain their reaction to it." Twenty additional librarians were asked to assist, and we may, therefore, assume that the present list represents the composite judgment of twenty-five high-school librarians.

In the list proper are descriptive notes for each title, and buying information is also given. Cataloging and classification information is provided with the future growth and enrichment of the library in mind. A directory of publishers and a complete index are included.

The Preface comments as follows on the usefulness of the list:

Practically all contributors mentioned weaknesses in the list. It stands to reason that any list restricted to five hundred titles will not satisfy the needs of any one school department for reference material nor be sufficient in recreational content. All this list can do is to suggest a basic collection for a library in a senior high school. The superintendent of schools who is obliged to do without the services of a librarian may well use it as a buying list by turning it over to a book jobber. Its very brevity helps make it a safe list. The librarian, when one is secured, can prepare lists for additional purchase with the aid of lists to be obtained from her own state library commission or state educational department, by the use of the *Standard Catalog for High School Libraries* published and kept up to date by means of supplements by the H. W. Wilson Company, New York City. She can keep in touch with current publications by using the *Booklist*, a monthly book selection guide published by the American Library Association.

It may readily be agreed that a brief list prepared as this one has been will prove highly useful. However, we may hope that the association plans to extend its activities in the preparation of a much longer list meeting better the needs of the special fields of instruction and the need for recreational reading which, it is admitted in the quotation, are not well served by the present list. A list for junior high school libraries would also be timely, especially since the junior high school in many quarters is widening the range of the pupils' reading contacts. And, while we urge the lengthening of lists for the upper secondary level and the compilation of lists for the lower secondary level, we may hope that the association will have the resources and can see its way to apply procedures more scientific

than sole reliance on the judgments of librarians. Unquestionably such judgments are valuable, especially in the preparation of a first short list, but they alone are hardly adequate to the larger task.

#### A DISCUSSION OF EXAMINATIONS IN ENGLAND

The subject of examinations—to what extent they should be relied upon, if at all, and of what they should be constituted—has long caused controversy. It is generally known that more reliance is placed on examinations in European countries, including England, than in the United States. Because of this difference there should be considerable interest in the following extracts from a discussion of the subject, under the caption "Uses and Abuses of Examinations," by a correspondent of the London *Times Educational Supplement*. The reader in this country will probably take particular note of the reference to recent efforts to improve the examinations along lines similar to the objective procedures being developed here, the advocacy of large-scale scientific investigation of the whole problem, the acknowledgment that the highest selective standards may not be compatible with the democratization of education, and the admission of the desirability of recognizing in some way the school record of the pupil.

It seems certain that, so far as England is concerned, examinations are here to stay. As Sir Michael Sadler has said, "They are too convenient to be wholly dispensed with. For good and evil they fit in with English psychology—with the state of mind which wants to be sure that teachers and pupils are doing their work up to a decent level, which believes in prodding the careless and the indolent." It behooves us, therefore, to inquire how the present system can be improved and, in particular, how the school-certificate examination, which dominates the work of at least sixty thousand children in secondary schools, may be purged of its harmful by-products.

One or two common fallacies must first be cleared out of the way. It is often said that examinations are necessarily evil in themselves. A glance at nineteenth-century history is sufficient to disprove this position. Their introduction was one of the chief factors in the reform of the universities, the public schools, and the higher education of women and girls. . . .

People still talk as though examinations were carelessly set and marked. There is no excuse for such ignorance since the publication of books like those by Dr. J. M. Crofts and Mr. B. C. Wallis, which explain the extremely scientific methods of the modern examiner. The question papers for the school certificate are revised and discussed to the last detail by a committee which includes rep-

representatives of both schools and universities. Standardization has become a skilled, indeed a highly technical, art; for large numbers, at any rate, statistical methods give almost complete certainty, since the curves immediately display any fault in the papers or in the marking of an individual examiner. Even for subjects which from their nature are notoriously difficult to standardize—for example, the essay—an objective method has been devised. . . .

There is something to be said for the belief that examinations are unreliable as tests. At present there is often uncertainty about the purpose of a particular examination. Briefly, one can set out to test knowledge (attainment) or capacity (intelligence); but an attempt to test both at once, in fact, tests neither successfully. There is an additional complication in that examinations may be either qualifying or competitive; and, as they often attempt to be both at the same time, further muddle is caused. A logical classification would thus be: (1) attainment—(a) qualifying, (b) competitive; (2) capacity—(a) qualifying, (b) competitive. Some examinations clearly fall under one only of these headings; for example, those for the higher civil service, which, as they test ability in subjects which will not be required for the candidates' subsequent work, can be classed under 2 b. The pass degree and the school certificate should be regarded solely as qualifying tests of knowledge; but where are we to place matriculation? Strictly, it too should fall under 1 a, but in practice it imposes also a test of capacity, since the regulations insist on credit in five subjects (not all of which will be pursued in later courses) to be taken at one and the same examination. . . . [Matriculation] fails at present through divided aim. But that is not a fault of the examination per se.

It is a fallacy to suppose that examinations necessarily restrict school studies. The present grouping of subjects for the school certificate, and still more for the matriculation, is undoubtedly narrowing; but this fault could be rectified by giving equal weight . . . to the subjects in Group IV. The further charge that examinations produce emotional strain is undoubtedly true, especially with girls. . . .

The real trouble lies not in examinations but in their abuse, and everyone admits that they are being widely abused in this country. The excessive anxiety for "results" leads not only to the unhealthy emotional state that has just been noticed but to a wrong attitude towards education, which shows itself in many ways. The comparison of schools and of individual teachers, based solely on examination results, is prevalent among the general public and members of local education authorities. All that one is entitled to expect is that a reasonable proportion of candidates should gain the school certificate; a very low percentage shows weakness, but a record of 100 per cent is no less indicative of faulty examining or teaching. The written examination is chiefly a test of (1) rote memory, and (2) the power of writing the sort of answer that secures good marks. Leaving the question of memory for a moment, it is plain that answering questions is a highly specialized job, skill in which can be (and of course is) inculcated. Hence, we constantly find teachers who really know better adopting

uneducative methods because they realize that only by spoon-feeding their pupils can they get satisfactory results. The pupils in their turn learn only to cram—a habit not without its value in life but one which school is hardly the right place to form. The whole point of view, indeed, is wrong. . . . Yet here again the grievance is not with the nature of examinations themselves.

Certain children it is true will never do themselves justice in a written examination. The atmosphere of the room seems to inhibit thought, or the time limit prevents them from producing a sufficient quantity to pass. In this respect the examination is not unlike life; the battle is apt to be to the swift and the self-confident, so that the discipline, though discouraging at the time, may in the long run prove salutary. As for the occasional genius who fails (usually in story-books), he can look after himself; his light will not be hid. . . .

What then is the remedy for these abuses? For complete reform we shall have to await the fulfilment of Sir Michael Sadler's hope—the appointment by government of a commissioner who during a term of years would investigate scientifically the whole problem. Private inquiry, even on a fairly large scale, cannot accomplish much; we require the work of statisticians, psychologists, and economists; above all, we need someone who will reach practicable findings, since we have to cater nowadays for mass production in both teaching and examining. Discouraging as it may sound, we cannot have at the same time the highest standards and an educated democracy; we must choose between a lofty standard for the few and something less precious for the many.

Fortunately, however, there are various minor reforms possible while we are waiting for the commissioner. If school examinations were regarded more as domestic affairs, with no publication of results in the local press, it would be an advantage. If the school record could count, as a student's record counts in an internal university examination, it would be much fairer; but this is one of the improvements that mass production makes impracticable, since such records could not conceivably be standardized. The same objection applies to the plan of letting each school conduct its own examination, aided by an external examiner from another school. This system works for the universities. It could not work for hundreds of institutions. . . . Yet these disadvantages all seem to disappear in a scheme proposed . . . by Dr. William Edwardes, formerly H. M. Inspector of Schools, and Chief Inspector of the Central Welsh Board. His proposal is that the present school certificate should be abolished, and in its place a certificate (or certified record) should be given to each candidate, "which does no more than give the value of the candidate's performance in each presented subject taken separately."

By this revolutionary but simple plan Dr. Edwardes contrives "an examination which shall give the schools the utmost freedom without sacrifice of efficiency." . . . If there is no pass or fail, schools cannot compete in unhealthy rivalry; a candidate who now fails the whole examination by a few marks in one subject would get credit for his actual performance; the excuse for emotional strain on the part of both teacher and child would be lessened, if not destroyed;

and each individual would feel free to work at the subjects for which he had a bent. Everybody knows that the pass-line is an arbitrary and artificial thing; yet at present a pass is a pass and a failure is a failure. Under Dr. Edwardes' plan all that would go. . . .

Examinations have their uses. They supply a genuine stimulus to many—probably the vast majority of—pupils. We all need some goal to aim at; and the young person is rare who can work steadily for the love of learning or for distant fame. Provided they are not abused, examinations are a powerful aid to the teacher; comparatively simple reforms could rid them of their worst drawbacks.

#### THE PROPORTIONS OF MEN AND WOMEN TEACHERS

The *New York Sun* makes available a summary of evidence relating to the numbers and proportions of men and women teachers in the United States. The summary was prepared by Frank M. Phillips, until recently chief of the division of statistics of the United States Office of Education. The study covers the period from 1890 to 1928 and, in general, shows that, while the number of men employed as teachers in the elementary schools of the country is decreasing, the number of men instructors in institutions of higher grade is increasing.

The summary reveals that, of the 1,010,232 teachers of all ranks in the United States, about 80 per cent are women, the men outnumbering the women only in the colleges. In high schools the women outnumber the men two to one.

The survey, which goes back to 1890, shows a marked and steady decrease in the number and proportion of men teaching in the public elementary schools from 1890 to 1920, a slight rally from 1920 to 1926, and another decline from 1926 to 1928.

In 1890, the survey shows, 121,877 men taught in the elementary schools of the United States. By 1910, despite the vast increase in the enrolment of pupils, the number had decreased to 63,024, going up to 75,436 in 1926, but receding to 69,455 in 1928. The private elementary schools have shown a similar tendency, the number of men there decreasing from 6,807 in 1890 to 1,466 in 1928. During this period the proportion of women teachers has been steadily increasing. In 1900 the women elementary-school teachers outnumbered their masculine colleagues by about two to one. In 1928 they outnumbered them by about eight to one.

In 1900 there were 286,274 women teaching in the public elementary schools. By 1910 the number was 389,952; in 1920, 513,222; in 1926, 569,195. By 1928 this figure had reached 573,257.

On the other hand, men teachers in the public high schools increased in number considerably in the same period of time, going from 3,648 in 1890 to 68,738 in 1928. The most striking increase in the ranks of these teachers was from 1920

to 1926, when their number almost doubled, from 32,386 to 63,374. In 1928 the number of men employed as high-school teachers was 68,738. In the private high schools the number of men teachers has grown from 3,272 in 1890 to 8,157 in 1928.

The ranks of women high-school teachers also have maintained a steady growth. In 1928 there were about twice as many women teachers as men in the high schools, a ratio which has held for years. From 1900 to 1910 the number of women high-school teachers more than doubled itself, going from 10,200 to 22,777. The decade from 1910 to 1920 showed the unusual increase of more than 47,000—the number going from 22,777 to 69,572, an increase of almost 300 per cent. This figure was almost doubled again in the eight years between 1920 and 1928, when 120,484 women high-school teachers were in the service.

In the colleges the men instructors outnumber the women by almost three to one. In 1920 the men numbered 21,644, reaching 32,650 in 1926 and 36,783 in 1928. The number of men teachers employed in the teachers' colleges and normal schools, both public and private, has also increased. In the public normal schools this increase has been from 2,963 in 1920 to 4,952 in 1926 and to 4,966 in 1928; in the private normal schools, from 597 in 1920 and 822 in 1926 to 865 in 1928.

This study includes no reference to the relative number of instructors of the two sexes in junior colleges. It should be a matter of interest to note that the studies which have been made of public junior colleges show that the proportion of men exceeds the proportion of women, but not by any such margin as is reported by Phillips for the colleges of the country. Thus, there seems to be something approaching a consistent progression in the proportion of men teachers from the elementary school upward through the complete educational system.

#### A STUDY OF DIPLOMA PRACTICES

Although approximately a half-million diplomas are annually awarded to graduates of secondary schools in the United States and although considerable dissatisfaction has been expressed with some phases of the diploma problem, until recently no information with regard to prevailing practices has been available. Such information has been published in a report of the Committee on Standard Forms of the Department of Secondary-School Principals of the National Education Association, a committee whose membership includes R. R. Cook, principal of the Roosevelt High School, Des Moines, Iowa; F. J. DuFrain, principal of the Senior High School,

Pontiac, Michigan; W. C. Reavis, of the University of Chicago; and H. V. Church, superintendent of the J. Sterling Morton Secondary Schools, Cicero, Illinois. The report was made for the committee by W. C. Reavis and Leonard C. Lund and is published as Bulletin Number 32 of the Department of Secondary-School Principals. Most of the summary and conclusion of the report are quoted. The report as a whole will be considered at the next annual meeting of the department to be held in Detroit in February.

The secondary schools from which data were gathered are widely distributed over the United States, being located in forty-five states and the District of Columbia. . . .

More than 94 per cent of the schools from which data were secured report that a standard form of diploma is adopted for a period of years. This indicates that some thought has been given to the problems involved in diploma selection and that standardization is considered a desirable practice. . . .

The data gathered show that secondary schools with smaller enrolments have used the same form of diploma for shorter periods of time than have the schools with larger numbers of pupils. The average period of continuous use in the schools enrolling over 2,000 pupils is more than twice that of the schools enrolling fewer than 250 pupils. . . .

Evidence was presented which shows that different diplomas are awarded upon completion of varying courses of study in many schools. Although only 17 per cent of the principals reported this practice, a number of others use a form which has a blank space into which is written the name of the curriculum pursued. . . .

The cost of secondary-school diplomas varies greatly. In schools enrolling less than 250 pupils the average cost is \$1.81, while in schools of over 2,000 enrolment the average cost is only \$0.62. In each of the intervening enrolment groups the cost per diploma decreases as the size of the school increases. If other factors than numbers were excluded, the unit cost would decrease with the increasing number of diplomas under the operation of economic laws. However, the fact that the cost decreases more than 65 per cent would seem to indicate that additional factors than numbers alone are responsible for part of the decrease. This contention is borne out by data which show that schools in the group having the smallest enrolment lead all others in the use of sheepskin diplomas and engraving, items which contribute more than any others to the increased cost.

Two additional factors which have some relation to the cost of the diploma are disclosed in an analysis of the data. Several schools enrolling over 750 pupils make use of the school printing-department for inscribing the documents. This practice seems to be justified by the practical nature of the experience given pupils in the printing-department as well as by considerations of economy.

A slight additional advantage in price may be secured by the schools which have a longer period of standardization, during which time the additional cost of a new plate is obviated.

Evidence presented about the size of diplomas shows an extremely wide variation in practices. Forty-seven schools, or slightly less than 16 per cent of those included in the study, use diplomas of approximately the same size, fourteen inches by seventeen inches. Below this modal group the sizes range from three inches by five inches to twenty-four inches by thirty inches. Measured in terms of the area, the largest diploma is forty-eight times as large as the smallest and three times as large as the modal size. These wide variations in size would seem to indicate the lack of a well-defined conception on the part of school administrators of the use to which the document is to be put by the graduate. If the diploma itself is to be used by the possessor, considerations of convenience would seem to indicate that the extremely large sizes should be avoided. . . .

Two kinds of material, artificial parchment and paper, are used with about the same frequency for secondary-school diplomas. Japanese vellum and sheep-skin are together used in only 17.7 per cent of the schools reporting. These facts show that the practice of most of the schools is to use the material which is not the most expensive. The method of inscription shows the same tendency, lithographing and printing being used in more than three-fourths of the schools reporting. The use of less expensive methods and practices, when they do not decrease the value of the service rendered, is to be commended.

Division of the inscription of the diplomas into convenient parts makes an analysis of the text matter possible. This analysis discloses the uniform practice of putting the name of the secondary school in bold type at the top of the diploma. This is customary in practically all documents and standard forms, the chief variation being in the size of type used. Centered under the name of the school a cut is nearly always used to add decorative effect. Most frequently the picture is that of the school building or one of its details, an item which is easily justified by reasons of sentiment. The introductory phrases and body of the text matter show a high degree of uniformity when the meaning of the content, rather than the exact wording, is considered. This appears to be justified by the very nature of the documents, as they certify to school training which in most cases is practically equivalent. The concluding phrases are about equally divided between two forms, which include over 80 per cent of the cases.

The controlling factors in the phraseology of the inscription should be good diction, simplicity of style, and accuracy of text matter. These factors indicate that most of the secondary-school diplomas would profit by a revision of the inscriptions eliminating some of the verbiage. In this connection consideration should be given to the inclusion of specific information about the nature of the course pursued and the degree of success exhibited by the graduate. Although only five of the schools included in the study now make use of such a practice, it is nevertheless worthy of careful study and evaluation. Whether such infor-

mation would be most appropriately placed on the front or reverse side of the diploma would have to be determined by objective means after a number of schools had followed each one of the practices.

Slightly over one-fourth of the secondary schools report the use of the folder type of diploma. This discloses that one of the few innovations in diploma practices has already been adopted by a considerable number of schools. The fact that the document is inclosed in a folder tends to make practical limitations on the size that can be conveniently used. This deduction is supported by the data, which show that the size most frequently used is six inches by eight inches.

#### INTERPRETING A JUNIOR HIGH SCHOOL TO ITS COMMUNITY

All important innovations in the public schools require interpretation to the members of the communities served. It is heartening to encounter evidences of intelligent efforts to carry patrons along as the schools progress. A recent example is a carefully-prepared and attractively-printed brochure bearing the title *South Pasadena Junior High School*. It contains as frontispiece a picture of the attractive tower of the junior high school building in South Pasadena, California. There is a foreword by the superintendent of schools, George C. Bush. The main body of the brochure of thirty-two pages, which was prepared by the principal of the junior high school, G. Derwood Baker, contains brief, popularly-written descriptions of the work in the several subjects, of the library, the "non-specialized activities," the program of counsel and guidance, and the social organization and control. The booklet closes with the following invitation to patrons to visit the school.

A school is a living, throbbing thing that cannot be captured and put on paper. At most, this article gives only a barren silhouette of the organization and activity of this institution. The spirit of the school and the interested endeavor of its pupils can best be caught by those who take the time to visit us while school is in session. This we earnestly invite all parents and friends of the school to do. You are invited to visit classes at any time. When disturbing reports come home or unsavory rumors reach you, the thing to do is to come to school and find out the facts and discover just how affairs are being handled. The faculty and administrative officers of the school are available for conferences, but on account of the pressure of routine duties it is advisable to make appointments.

When you do come to the South Pasadena Junior High School, we are confident that you will discover a courteous, friendly group of children and teachers busily engaged in activities which are, for the most part, absorbingly interesting to them.

## RECENT DEVELOPMENTS IN GERMAN SECONDARY EDUCATION. I

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After the German Revolution of 1918 the newly established republic undertook the task of reforming the educational system of the country. Under the old régime a dual system had existed, whereby children who received a secondary education received their preparatory training in a special preparatory school (*Vorschule*) quite separate and apart from the elementary school (*Volksschule*) intended for the masses. Those who attended the *Volksschule*, usually an eight-year school, seldom found their way into a secondary school leading to the university. It was expected that those who attended the *Volksschule* should go into the lower positions of trade and industry; in some cases they might pursue continuation courses in addition to the training they had secured in the *Volksschule*. The managerial and controlling positions in the social order were held by those who had secured a secondary education after having passed through a *Vorschule* giving three or four years of preparatory training. Obviously, then, two educational routes existed—one for the controlling classes and one for the controlled masses.

Educational reform in the new republic attempted to break up this class stratification in the school system and to organize a new system on a democratic basis, which would offer equal educational opportunity to all children regardless of their social or economic status. However, democracy in education does not mean exactly the same thing in Germany that it does in America. In America democracy in education (Reference is made at the moment to education at the secondary level.) commonly means the extension of education to the masses. In Germany, on the other hand, democracy in education means that those who may receive secondary education shall be rigidly selected from the elementary school but that social status

shall not be a factor in determining who may be selected. Hence, to understand the German secondary schools, it is important to understand the theoretical basis upon which selection of pupils for the secondary schools is made, as well as to analyze the results of the selective process.

In the present German school system the *Grundschule*, which consists of the lower years of the *Volksschule*, functions rather definitely in the democratization of education and in the selection of pupils for the secondary schools. The *Grundschule* is intended for the children of all classes, and the various secondary schools as well as the upper years of the *Volksschule* are based upon this common foundation. Hence, the *Grundschule* is intended to replace the *Vorschule* of the old educational system and to bring the class of children formerly accommodated by the *Vorschule* into a single institution together with the children from the social strata for which the *Volksschule* formerly existed. The legal basis for the *Grundschule* and for the schools built upon the foundation which it lays is set forth in the Constitution of 1919, a section of which reads:

The public-school system is to be constructed as a unit. The system of middle and secondary schools is to be built upon a *Grundschule*, which is to be a school for children of all classes. This superstructure shall be governed by the multiplicity of life-vocations, and the admission of a child to a particular school shall be determined by his ability and inclination, not by his economic and social position or the religious creed of his parents.<sup>1</sup>

A federal enactment of 1920 made the *Grundschule* a four-year school, and at the present time the general selection of pupils for the secondary schools takes place at the end of this four-year period. Hence, the children making up the secondary-school population are selected from a stream of pupils including children of all classes, and they are selected after four years of elementary schooling, or at the average age of ten years.

The percentage of the pupils in the *Grundschule* who are selected for the secondary school varies in different communities. In Germany as a whole about 15 per cent transfer to a secondary school from the *Grundschule*,<sup>2</sup> in some cities the percentage is much higher

<sup>1</sup> *Die Verfassung des Deutschen Reichs vom 11. August, 1919*, Art. 146.

<sup>2</sup> Gertrud Bäumer, *Schulaufbau, Berufsauslese, Berichtigungswesen im Auftrage des Reichsministeriums des Innern*, p. 39. Berlin: Carl Heymann, 1930.

than 15,<sup>1</sup> whereas in some rural communities it approaches nil. The percentage of those who transfer at this time to a nine-year secondary school leading to the university is much larger in the case of boys than in the case of girls. However, the percentage of girls who enter the intermediate type of secondary school (*Mittelschule*), which offers six years of training above the four-year *Grundschule*, and the percentage of girls who remain in the *Volksschule* to complete the four remaining years of that institution are considerably larger than the corresponding percentages of boys.<sup>2</sup>

The first year in the secondary school is regarded somewhat as a trial period, and part of those who transfer to the secondary school return later to the main stream of pupils passing through the *Volksschule*. Moreover, many of those who do not return to the *Volksschule* stop at the end of the *Mittelschule* or at some other point before they have completed a secondary-school education leading to the university. Bäumer presents data indicating that about one-fourth of the pupils in secondary schools in 1926 were in *Mittelschulen*, which end three years before the level of the university, and that a significant proportion of those who enter one of the nine-year secondary schools fail to complete the course. The proportion failing to complete the nine-year course naturally varies with different types of schools. Of those entering the *Gymnasium* and the *Oberrealschule* (schools of types which will be explained later), approximately 20 per cent and 40 per cent, respectively, leave before having reached the sixth year of the school; and, of all children entering the secondary schools, fewer than one-third reach the final examination (*Reifeprüfung*) at the end of the nine-year school. In commenting on this situation, Bäumer says that the secondary schools have always closely filtered out the capable and that within limits "this is indeed a part of their function."<sup>3</sup> Although this filtration may appear very close, no attempt need be made to pass judgment on its efficiency, and it may be stated that the percentage of German youth who pass through the secondary schools has been increasing somewhat.

In the actual process of selecting pupils for transfer from the

<sup>1</sup> Reinhold Lehmann, "Germany," *Educational Yearbook of the International Institute of Teachers College, Columbia University*, 1928, p. 116. Edited by I. L. Kandel. New York: Teachers College, Columbia University, 1929.

<sup>2</sup> Gertrud Bäumer, *op. cit.*, p. 31.

<sup>3</sup> *Ibid.*, p. 25.

*Grundschule* to the secondary school, neither the *Grundschule* nor the secondary school has the final word in determining whether a particular child shall be transferred. Selections are made by a committee, which includes members representing interests other than those of the two schools mentioned. The membership and procedure of such committees vary somewhat according to local conditions, but in general they are quite similar. The membership and procedure of the committee in Hamburg are described in the following quotation:

The selection of pupils for the secondary schools takes place in accordance with regulations of the board of education. The city is divided into selection districts; six or eight *Grundschulen* are grouped around each secondary school. The selection committee for a district is composed of one representative of each *Grundschule* of the district, two representatives of the secondary school, two representatives of the parents' association (*Elternschaft*), and one representative of the private schools. A head committee appointed by the board of education is responsible for the required uniformity of procedure and systematically oversees results. The judgment of the *Grundschule* (certificate and characterization of pupil) carries the greatest weight. Most committees accept without examination those whom the *Grundschule* declares to be sufficiently mature for the secondary school. The examination takes the form of instruction for a few days, often for a period of a week or more. The instruction is given in part by the teacher in the *Grundschule* and in part by the teacher in the secondary school. A majority of committees use psychological examinations, with tests worked out by the department of psychology of the university, to supplement their other evidence. Decision is reached in a general conference of the committee, to which the earlier teachers of the candidates are admitted.<sup>1</sup>

The procedure described in this quotation is presumed to result in the selection of children on the basis of their ability and of their special inclinations. In practice it has often been found that elementary schools attended by children from well-to-do families in which the fathers are professionally employed send a much larger percentage of their pupils into the secondary schools than do elementary schools attended by pupils who come from families of the poorer classes. This statement is substantiated by the data given in Table I. So far as the cities mentioned in this table are concerned, the percentages of children from well-to-do residential districts who attend the middle (six-year) and the secondary (nine-year) schools

<sup>1</sup> *Das Schulwesen Hamburgs*, p. 7. *Sonderdruck aus dem Pädagogischen Lexikon, Band II.* Leipzig: Velhagen & Klasing.

are, with one exception, larger than the corresponding percentages of children from poor districts.

Data with regard to the professions of the parents of pupils in the different types of schools suggest more forcefully than the data given in Table I the operation within the school system of a selective factor other than the ability of the child. Table II presents such data concerning the twelve-year-old children in the schools in Cassel in 1928. The fairly uniform decrease in the percentages for the nine-year secondary schools, as one reads down the columns of Table II, and the progressive increase in the percentages for the elementary schools show unquestionably that in Cassel children from families in

TABLE I  
PERCENTAGE DISTRIBUTION OF PUPILS IN SCHOOLS OF THREE  
TYPES ACCORDING TO TYPES OF RESIDENCE DISTRICT\*

Type of Residence District	Nine-Year Secondary Schools	Six-Year Secondary Schools ( <i>Mittelschulen</i> )	Elementary Schools ( <i>Volksschulen</i> )
Poor district:			
Friedrichsheim .....	4.9	2.1	93.0
Wedding .....	9.5	2.7	87.8
Well-to-do district:			
Tiergarten .....	26.1	3.3	70.6
Charlottenburg .....	30.5	2.7	66.8
Wilmersdorf .....	47.7	6.2	46.1

\* Adapted from Reinhold Lehmann, "Germany," *Educational Yearbook of the International Institute of Teachers College, Columbia University, 1927*, p. 146. Edited by I. L. Kandel. New York: Teachers College, Columbia University, 1928.

which the fathers are employed in the "preferred professions" are much more likely to receive a secondary education leading to the university than are children from families in which the fathers are in more humble employment. This situation is comparable to that reported a few years ago with regard to secondary education in our own country.<sup>1</sup> The irregularity of the percentages for the six-year secondary schools indicates that the intermediate type of secondary school is less a class institution than either the *Volksschule* or the nine-year secondary school. When the method of selecting pupils for the secondary schools is recalled, it is interesting to note from

<sup>1</sup> George Sylvester Counts, *The Selective Character of American Secondary Education*, pp. 26-35. Supplementary Educational Monographs, No. 19. Chicago: Department of Education, University of Chicago, 1922.

Table II that teachers in the *Volksschule* uniformly consider their own children intelligent enough to profit by a secondary education.

Tables I and II indicate that there are wide differences in the percentages of children from different social levels who attend the secondary schools. Many would contend, however, that such a distribution of pupils within the schools is in accordance with the

TABLE II  
PERCENTAGE DISTRIBUTION OF TWELVE-YEAR-OLD PUPILS IN SCHOOLS  
OF THREE TYPES IN CASSEL IN 1928 ACCORDING  
TO OCCUPATION OF FATHERS\*

OCCUPATION OF FATHER	NINE-YEAR SECONDARY SCHOOLS INCLUD- ING PRIVATE SCHOOLS		SIX-YEAR SECONDARY SCHOOLS ( <i>Mittelschulen</i> )		ELEMENTARY SCHOOLS ( <i>Volksschulen</i> ) INCLUDING SCHOOLS FOR BACKWARD PUPILS	
	Boys	Girls	Boys	Girls	Boys	Girls
University professor, director, manufacturer, or higher military officer.....	100.0	98.4	.....	1.6	.....	.....
Teacher in <i>Volksschule</i> .....	100.0	100.0	.....	.....	.....	.....
Civil servant of middle grade, except teachers.....	95.3	79.6	4.7	16.3	.....	4.1
Merchant.....	63.6	44.7	14.6	28.5	21.8	26.8
Surveyor, engineer, or technician.....	50.0	64.3	8.3	14.3	41.7	21.4
Artisan (master craftsman).....	36.9	15.9	14.5	25.4	48.6	58.7
Policeman, watchman, or lower military officer.....	50.0	9.1	.....	18.2	50.0	72.7
Civil servant of low grade.....	44.7	20.2	17.0	40.4	38.3	39.4
Foreman or junior architect.....	34.9	4.0	18.6	28.0	46.5	68.0
Innkeeper or small merchant with independent business.....	10.9	8.6	4.7	14.3	84.4	77.1
Driver or messenger.....	2.8	4.3	11.4	4.3	85.8	91.4
Laborer.....	5.3	1.7	7.2	7.0	87.5	91.3

\* Adapted from data presented by G. Pröbsting in the *Deutsches Philologenblatt* (August 14, 1929), as cited by Gertrud Bäumer, *op. cit.*, pp. 27-28.

ability levels of the different social strata represented. One may be skeptical of the existence of the high correlation between intelligence and social position which such a contention presumes, but there is nothing specific in the information presented to indicate the degree of truth, if any, in the contention.

Data bearing indirectly on the relation between the ability of pupils and the social status of the families from which they come are shown in Table III. In Stuttgart three thousand pupils were tested shortly after their transfer to secondary schools. In the part of the

study bearing on the relation in question, five social levels were distinguished according to the occupation of the fathers: Level A, university professors and men of similar social standing; Level B, those occupying middle-grade positions in industry and civil service, and the like; Level C, artisans, mechanics, clerks (*kaufmännisch Angestellte*), and men occupying positions of similar nature; Level D, civil-service employees of low rank, skilled laborers, etc.; and Level E, unskilled laborers. Performance on the examinations was used as the criterion of ability; and, in tabulating the results, two levels of

TABLE III

RELATION OF OCCUPATIONAL LEVELS OF FATHERS OF THREE THOUSAND PUPILS IN STUTTGART TO PERFORMANCE OF THE PUPILS ON AN EXAMINATION GIVEN AFTER THEIR TRANSFER TO SECONDARY SCHOOLS\*

Occupational Level of Father	Percentage of Children Whose Performance Was on Level 1	Percentage of Children Whose Performance Was on Level 2
A (university professor, etc.).....	46.2	27.9
B (employed in middle-grade position in industry and civil service, or the like).....	26.7	32.0
C (artisan, mechanic, clerk, etc.)...	15.2	27.9
D (civil-service employee of low rank, skilled laborer, etc.).....	7.3	17.9
E (unskilled laborer).....	1.9	11.8

\* Adapted from data presented by Lotze in *Württembergische Schulwarte* (1928, No. 10), as cited by Gertrud Bäumer, *op. cit.*, p. 32.

performance were recognized, Level 1 and Level 2, Level 1 indicating the higher performance.

Table IV presents the data of another study of the relation between the performance of pupils on an examination and the occupation of their fathers, which was made by Köster in Altona. The study included 597 pupils who were being transferred from the *Grundschule* to a secondary school. Six levels of performance were distinguished, and the data were tabulated according to the percentage of the pupils in each social or professional group achieving each of the six levels.

In the two studies just reported the correlation between high performance of the children on examinations and high professional or

social status of the families from which they come is obvious. However, the question of whether high or low performance on an examination is necessarily associated with high or low intelligence depends somewhat on the nature of the examination. Unfortunately,

TABLE IV

PERCENTAGE DISTRIBUTION OF CHILDREN FROM EACH OCCUPATION GROUP ACCORDING TO PERFORMANCE ON AN EXAMINATION GIVEN TO 597 PUPILS IN ALTONA AT THE TIME OF THEIR TRANSFER TO SECONDARY SCHOOLS\*

Occupation of Father	Better than Good	Indisputably Good	Good on the Whole	Indisputably Satisfactory	Satisfactory	Unsatisfactory
Higher profession . . . . .	27.6	35.2	21.8	13.5	1.9	0.0
Middle-grade position . . . . .	9.0	21.9	21.8	23.7	14.7	8.0
Skilled laborer or artisan . . . . .	5.0	11.7	18.7	24.2	26.2	14.4
Unskilled laborer . . . . .	1.0	10.4	15.0	25.4	27.3	20.0
Not specified . . . . .	5.7	1.9	24.8	26.7	22.8	18.1

\* Adapted from H. L. Köster, "Schülerauslese, Elternberuf, und Begabung der Kinder," *Amtsblatt der Stadt Altona*, IX (January and February, 1929), as reported in *Zeitschrift für Pädagogische Psychologie*, XXX (May, 1929), 249-50.

the studies reported are not especially clear on this point, although Köster comments on his own data as follows:

If we could say last year "that capacity (*Begabung*) is indeed not so dependent on the social stratum to which the child belongs as one supposes," the statement in this form cannot be confirmed by this year's evidence. Even if one considers that ability and school performance do not always coincide and that in the socially better-situated strata limited capacity is easier to smooth over so that better performance will be achieved than might be expected from the capacity possessed, yet these differences in performance are indeed so large that they cannot be explained entirely by a smoothing-over possibility. From this year's evidence one must conclude that the influence of inheritance and environment has indeed been very great, not only on performance, but also on capacity (*Begabung*).<sup>1</sup>

Other evidence from Köster's study indicates that 90 per cent of the children from the highest social group transferred to the nine-year secondary school and that, at the same time, 84.6 per cent of these children belonged to the better half of the group. From the lower social groups, however, only a small percentage of those whose

<sup>1</sup> H. L. Köster, "Schülerauslese, Elternberuf, und Begabung der Kinder," *Amtsblatt der Stadt Altona*, IX (January and February, 1929), as reported in *Zeitschrift für Pädagogische Psychologie*, XXX (May, 1929), 249-50.

ability was of a high degree transferred to secondary schools; only 17.4 per cent of these children entered nine-year secondary schools and 52 per cent the *Mittelschulen*, whereas 30.5 per cent remained in the *Volksschulen*. Köster realizes that, because of economic circumstances, all pupils do not follow the educational road for which their intelligence equips them, and he feels that those of ability who do not attend secondary schools must be helped in some way. He points to the continuation schools and trade schools (*Berufschulen* and *Fachschulen*) as the avenue through which this help should be extended.<sup>1</sup>

In her concluding remarks, made after summarizing a considerable amount of evidence of the kind shown in Tables I-IV, Bäumer makes the following statements concerning the transfer of pupils from the *Grundschule* to the secondary school:

Out of all these figures two points clearly present themselves. The first is that in the *Grundschule* the social background of the parents and the performance of the pupils are in very close agreement. This means, on the one hand, that within the sphere of the *Grundschule* the advantage of children from cultured homes over children who are perhaps more gifted but who are hampered because of their home background cannot be evened up. On the other hand, it naturally means that the average higher social position of the parents expresses itself in better inheritance by the children. The really fundamental thing for the problem of selection lies in the finding that of the children of the first-performance group, in so far as they belong to the laboring class, only 17.4 per cent [referring to Köster's data] transfer to a secondary school. This means that it has not yet really been made possible for gifted children from unpropertied social levels to make the climb into a secondary school. On the other hand, children from other social levels who are of only average or of even more limited endowment make the transfer to a secondary school.<sup>2</sup>

The crux of the situation lies in the last two statements: bright but poor children commonly fail to be transferred into secondary schools, whereas transfer is often possible for those of wealth although of mediocre ability. When one then recalls the provision in the constitution that admission to secondary schools shall be based on ability and inclination, it is obvious that social position and economic status are influential in determining inclination.

<sup>1</sup> *Ibid.*

<sup>2</sup> Gertrud Bäumer, *op. cit.*, pp. 34-35.

[To be concluded]

## CURRICULAR AND EXTRA-CURRICULUM POSSIBILITIES OF JOURNALISM IN SECONDARY SCHOOLS

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So strongly were the traditional subjects intrenched as a completely adequate high-school curriculum that, when the new conception of education as social adjustment demanded socializing activities, the new activities were admitted perforce but were grudgingly given the title of "extra-curriculum activities." The implied dualism is unfortunate. Fundamentally, the curriculum and the extra-curriculum have the same goal, and, as each increases in excellence, they tend to approach each other or even to coalesce. Indeed, by this process various subjects have entered into the curriculum, not as interlopers, but as integral parts of the rich program that now provides for the varied and vigorous life in the modern high school.

One of the first of the extra-curriculum subjects which gradually worked its way into the curriculum was a brief course in news-writing, which as a regular subject was given the name of journalism. The way in which this subject developed and the organization of its courses offer an excellent illustration of the integration of the curriculum and the extra-curriculum. For that reason the writers propose to discuss this development, to detail representative practices and the organization of the work as it is carried on in the larger secondary schools of Southern California, and to consider the specific educational functions of journalism as technical, practical, and social training. The experience of teachers, administrators, and pupils who have been concerned with courses in journalism will be the basis of the discussion, and this experience will be interpreted in the light of the theory set forth by leaders in education. Journalism, as taught in secondary schools, teaches how to write for print and aims

to develop critical appreciation of journalistic material. It involves the study of professional organs of news and typical masterpieces of journalism and is correlated with the production of school publications. This article is concerned only with actual practices and does not include a discussion of theories as to material which should be included in the course. Neither does it evaluate the various practices, except to give a few common-sense comments in connection with certain phases. There will be no attempt to prescribe the nature or amount of material in secondary-school journalism in general or the method of presenting it, such matters being dependent on conditions in individual schools.

Although the majority of secondary schools have maintained certain activities of a journalistic nature for approximately thirty-five years, not until recently was the field defined into secondary-course units and included in the curriculum as an accredited subject. In the beginning a few enterprising pupils, desiring to carry out a project, worked together and published a magazine, yearbook, or news pamphlet representing the various interests and activities of the school. As time went on, these publications became a part of the secondary-school activities, but it became customary to designate only a few scholastically superior pupils to take part in these activities. To be on the staff of a school publication was a mark of distinction based on achievement in unrelated fields, perhaps for merit in English. When the first courses in journalism were organized, the same standards of admission were adopted until educators began to observe that there seemed to be no correlation between participation in school activities and superior scholastic ability or capacity for leadership. In the case of journalism the point of view has been changing so that the question considered is not what a pupil has to *give* to such work but what he may *gain* from doing it. This change has resulted in reducing the scholarship requirements for entrance to the course and in basing the requirements on a brief diagnosis of the pupil's character, of his adaptation to the work, and the probable benefit he may obtain from doing it. Thus, extensive work has been made possible in the field of journalism; pupil interest in the subject has increased the enrolment; and the opportunities afforded by such work for technical, practical, and social training

have been recognized. This interest has continued until many schools have a separate department of journalism, and nearly every school in the state of California has at least one person to teach classes in the subject. Courses in journalism have been included in the curriculum side by side with the old accepted courses in science, mathematics, Latin, and the rest; and they occupy a place of acknowledged importance in secondary education.

Courses in journalism in the secondary schools in Southern California vary in number according to conditions in individual schools. The sixteen courses in journalism offered in the Pasadena Junior College (a large school with an enrolment of three thousand pupils) from the eleventh through the fourteenth grades, inclusive, are described in the following paragraphs. These courses are representative of those given in other large schools, and some of the same courses are offered in smaller schools.

1. A course entitled "Journalism Orientation" is given in the first semester of the eleventh grade. This course aims to give the pupil a general introduction to the profession of journalism and to interpret its meaning. The course surveys the power of the press, presents the types and the ethics of journalism, and establishes a general background for more intensive courses.

2. A course called "Survey of the Field of Journalism" is given in the second semester of the eleventh grade. The course aims to clarify in the minds of pupils the material comprising the subject matter of intensive courses in journalism, surveys the scope of journalism, presents the possibilities of journalism as a career, and includes the examination and discussion of various journalistic studies. No textbook is used.

3. "News-writing," which is given in the first semester of the twelfth grade, is a study of news and how to recognize it. The textbook is *News Writing for High Schools*.<sup>1</sup> The course requires three hundred pages of outside reading. News stories in local papers are analyzed; events of the school are written up; news values are discussed; and the principles of writing are reviewed.

4. "Newspaper Editing," given in the second semester of the twelfth grade, includes the preparation of material for newspaper

<sup>1</sup> Lee Arthur Borah, *News Writing for High Schools*. New York: Allyn & Bacon, 1925.

publication; critical analyses of stories with regard to their technical points, accuracy, and ethical values; and a study of editorial policy.

5. "Practice in Editing" is a course given in the first semester of the twelfth grade. The pupils in this course constitute the staff which edits the school newspaper and oversees its publication. This course gives laboratory experience in staff organization, determination of newspaper policy, co-operation with school organizations for service to the institution, and the application of the principles of journalistic writing.

6. The second course in practice in editing is given in the second semester of the twelfth grade and is a continuation of the work of the first semester. The pupils in this group constitute the advanced staff of the school newspaper, whose share in the publication of the school paper includes making plans for its content; assigning stories; gathering news; writing copy; reading and correcting copy; planning page layouts; writing headlines; proofreading galley and page proofs; determining the policy of the school paper with regard to typography, grammar, style, methods of gathering news, weighing news values, and the development of departments; and attaining proper relations with the school administration and organizations and with the community.

7. A course entitled "Bookmaking and Appreciation" is given in the first semester of the twelfth grade. The pupils in this course constitute the staff which edits the school annual and oversees its publication. The course seeks to acquaint the pupils with the best types of bookmaking and fosters book appreciation. It develops creative ability and discrimination and sponsors a book bazaar open to the public.

8. Another course in bookmaking and appreciation is given in the second semester of the twelfth grade. The class continues the work of the first semester and constitutes the advanced staff of the school annual. The publication of the annual provides opportunities for individual assignments to definite work in connection with a unified project. Work on the annual gives a general experience in the publication of books, drill in collecting data accurately and promptly, practice in presenting material impartially, experience in handling a large amount of material, practice in the preparation of copy, and business training.

9. The "History of Journalism," given in the first semester of the thirteenth grade, is open only to pupils preparing for college. The course considers the history of journalism in Europe and America; reviews general standards and types of journalism; teaches the pupils to read and understand the American newspaper and to appraise properly the social, literary, and political influence of the newspaper; shows the structure of the news story; presents the methods of securing news; and requires outside reading and reports.

10. "Practice in Journalistic Writing," given in the second semester of the thirteenth grade, includes practice in writing newspaper material of all types and gives practice in free-lance writing of various kinds. Notable press achievements are evaluated, and the marketing of literary contributions is studied. The course is intended to help the pupil decide whether he wishes to prepare seriously for the profession of journalism.

11. In the course entitled the "Technique of Journalistic Writing," which is given in the first semester of the fourteenth grade, the pupil considers intensively the relation of grammar, vocabulary, and style of composition to types of journalistic writing. He studies press ethics and the status of journalism in the world today; surveys types of newspapers; classifies newspaper content; receives drill in reporting, interviewing, and observation; and analyzes the structure of various types of writing.

12. In "Journalistic Criticism," a course given in the second semester of the fourteenth grade, the pupils study and evaluate journalistic masterpieces and are given practice in writing articles and in the criticism and revision of manuscripts. The characteristics of free-lance writing of various types are indicated for the purpose of supplying vocational information in the field.

13. The pupils enrolled in the course entitled "Newspaper Production," which is given in the thirteenth or fourteenth grade, work with the staff from the lower grades in publishing the school paper. In addition to the work outlined for the pupils in the lower grades, this group studies the school newspaper as a force in education, delves further into the problems of policy, and makes detailed studies of college and university papers.

14. The class in the course entitled "Magazine Production,"

given in the thirteenth or fourteenth grade, constitutes the staff of the school magazine. The pupils in this class gather, evaluate, and write material for the school magazine. They study commercial magazines and magazine makeup. Publishing the school magazine gives them business training.

15. A course in bookmaking and appreciation is given in the thirteenth or fourteenth grade with the understanding that the course will be continued a second semester. The pupils in this group work with the staff from the lower grades in producing the school annual. The members of the group act as committee chairmen for various units of work connected with the annual. The course affords an intensive study of bookmaking, of the evolution of books, of the history of printing, of ink, of paper, etc.

16. The course in bookmaking given in the thirteenth and fourteenth grades is open only to pupils who have taken the semester of work just mentioned. This course gives drill in assembling and recording masses of material. It affords opportunities for co-operation with pupils and faculty and for contacts with the commercial world. A study is made of the theme, or motif, in books. Making a book is a term project undertaken by each pupil. This project promotes original devices in bookmaking and gives experience in proofreading and in the making of dummies.

In addition to the regular classes scheduled in the department of journalism, the English department offers several classes which correlate with the work in journalism. Some of these classes are short-story writing, play and scenario writing, writing of poetry, humorous writing, and literary criticism. It is probably through the English department that the small secondary school will provide general training in journalism in addition to the news-writing courses everywhere included in the different curriculums. The extended program for teaching journalism which has been detailed is not practical nor advisable in a school having a small enrolment. However, the small school needs to impress its pupils with a realization that the field of journalism includes far more than writing news.

Unique administrative problems are involved not only in defining and developing units of study but also in arranging time schedules, in finding teachers of the right type, in supplying the physical or

laboratory equipment, and in making special arrangements in the programs for field trips. With the exception of classes serving as staffs responsible for school publications, classes in journalism may be scheduled for any period in the day. It is advisable to schedule staff classes for the last period in the day because they are really laboratory classes in character and often demand that a pupil stay with his work after the dismissal bell rings. Furthermore, there are times when a staff class must work for more than one period a day in order to bring out a publication on time. When the regular class period is scheduled at the end of the day, pupils are able to continue their work after school without a break. Occasionally administrators refuse to schedule journalism classes during the regular school day but set the time for the classes after school, before school, or at the noon hour. Such a practice does not give the pupils the best opportunities to profit by taking the work. Some plan must be adopted whereby excursions or field trips can be readily arranged with the least possible disturbance of the regular program. Visits can be profitably made to a metropolitan newspaper plant, the school printing-shop (if there is one), a paper mill, a wholesale paper establishment, an engraving plant, a binding establishment, news stands, public and private libraries, selected theater productions, places frequented by successful journalists, and worth-while press conventions whether within or without the school's district.

Teachers actually trained in schools of journalism to teach journalism are just beginning to come into secondary schools. Although there are many teachers of journalism doing very effective work, few of them are graduates of schools of journalism. The majority of them began their teaching careers in the field of English and, in one way or another, became interested in journalism. They gradually acquired a knowledge of principles and practices, and in the course of time they gave up their specific work in English for the new field. Probably the shift was primarily the result of the fact that the teachers found greater interest in directing creative work than in teaching English. Many a teacher of journalism has developed as a result of having been arbitrarily assigned by a principal to supervise a school publication.

If he is to make a success, the teacher of journalism must have a

real liking for the work, enthusiasm for its projects, a keen understanding of human nature, and the ability to direct a group of pupils so that they will produce results through their own efforts. Tact, tolerance, and patience are necessary characteristics. The teacher of journalism must be well informed with regard to pertinent and supplementary material in the field of journalism. Acquaintance with the methods of producing both commercial and school publications and experience in connection with the latter are important if the teacher is to direct such activities. The fact that a person has achieved success in writing for the commercial journalistic field is not necessarily an indication that he will make a good teacher of journalism. Commercial writers are often temperamentally unfit for teaching of any kind and fail to furnish the pupils with any inspiration except that of seeing a person who can write. The pupils soon lose respect for that ability when it is the only ability in evidence. The successful teacher of journalism will be keenly alert to the many opportunities which the field provides for developing ethical standards and for giving practice in meeting actual social situations and co-operative problems.

Elaborate equipment is not necessary in order to teach journalism successfully. However, there are certain material needs which are essential to the carrying-on of the work, and, if the school administration does not directly provide these materials, it determines ways and means by which they may be made available. A liberal equipment for teaching journalism in secondary schools provides textbook and library facilities, including reference books and an abundant supply of commercial and secondary-school publications of various types. Materials for school publications and funds for necessary professional services must be available. The administration seldom provides these but arranges approved ways and means of securing the necessary funds. In the staff rooms, which correspond to laboratories, fully-equipped desks, a typewriter, and a filing cabinet are necessary. A school printing-shop is not essential, although it is desirable. It should contain a press and accessories, type and accessories, intertype or linotype, a proof press, a wire stitcher, and a paper-cutter.

When classes in journalism were established in the secondary

schools, the type of individual who should be admitted to class membership immediately became a question. Previous to the formation of classes the assignment or appointment of pupils to work in journalism had generally been determined by superiority in scholastic achievement, although some little consideration was given to an individual's relation to his fellow-pupils. The tendency was to use this same standard as the basis of class membership. Later, because many pupils began to express the desire to obtain the work offered in the classes in journalism, some pupils with average marks (80 to 90 per cent) were admitted. As this method of choice seemed rather indefinite, an attempt was made to base the enrolment in journalism on intelligence quotients. There was great variation among the secondary schools with regard to the quotient required. The pupil usually had no knowledge of why he was or was not admitted to the class, as the pupils with quotients lower than that required were tactfully turned to some other class or activity to which they were eligible.

Observation of the groups assembled on the several bases of selection revealed that the individuals with average or inferior ability were giving their best efforts to the work and were deriving considerable satisfaction from it and that desirable qualities of character were being developed. There were marked cases of interesting individual progress. Furthermore, the classes containing pupils of average and inferior intelligence carried forward the production of school publications amazingly well. The outcome was that the classes were opened to any individual regardless of scholastic attainment or intelligence quotient, and today the classes in journalism contain pupils exhibiting the same individual differences in capacity, ability, and interests that are found generally in unsegregated classes in any subject.

The achievement of the aims of the course in journalism is undoubtedly made easier by the fact that the pupils generally have reasons for entering the course and are conscious of a purpose in the work. Therefore, the pupils approach the subject with interest and are equipped from the first with one of the three factors essential to the improvement of individual learning activities. They must also be given some understanding of the process or processes necessary

to reach the desired end and a sense of personal responsibility for reaching it.

By its very nature journalism is peculiarly suited to adaptation to individual progress. Rich in subject matter, it provides a variety of content. Individual in its appeal, it demands of the pupil the best that he can do because the doing is coupled with the idea of pleasing a waiting audience. Abundant in its possibilities for creating actual social situations, it provides a real practice ground on which to develop citizens. These facts explain the educational possibilities of journalism.

Journalism affords pupils training of a threefold type because it functions technically, practically, and socially. It is interesting to note under the three types of training the specific units of learning with their many details. Technical training implies learning how to do a thing in order to achieve an end; practical training implies learning something which may contribute to the ability to earn a livelihood; and social training implies learning how to live among one's fellows for the best interests of mankind. Technical training is afforded in all activities connected with writing news. Practice is given in preparing news stories, editorials, fillers, headlines, reviews, etc. All the various literary types are studied, and practice is given in writing short stories, poetry, essays, and argumentation. Practice is also provided in preparing the material which is more or less mechanical and yet necessary—the prefaces, indexes, advertising, etc. Practical training is afforded through the handling of the commercial phases and mechanical details of the various publications, and social training is provided by the very nature of the undertakings, which demand co-operation, individual responsibility, ability to deal with people, service to the institution, punctuality, capacity to work toward a goal, versatility, resourcefulness, perseverance, attention to detail, individual ability, originality, self-confidence, accuracy, judgment, and tact.

The pupils seem to be well aware of the benefits they are deriving from their work in journalism. From time to time individual pupils in the classes in journalism in the Pasadena Junior College have been asked to state specifically the permanent benefits they have

received from the course. Extracts from a few of the statements in the language of the pupils themselves are as follows:

I have gained a real appreciation for any printed matter.

I shall always value books more highly.

I have considered it a privilege to serve my school in some way, and it satisfies me immensely to have had a part in producing the school paper.

The main reward I got from the work was the true meaning of the word co-operation—it was just fine the way the various members helped each other.

It has taught me to be punctual because I knew I had to do things on time or else inconvenience a great many people.

I gained the idea of working toward some definite goal.

My work has helped me in other classes, for, in working with so many people, I have ceased to be afraid of my classmates.

I had never had much contact with others before. This class taught me to meet people and to interview them.

I have gained some experience in fitting into whatever place my help is needed.

It developed my resourcefulness.

I can meet more situations than ever before.

It taught me to depend upon myself.

I found out what I could do.

While these statements undoubtedly exaggerate the permanent good derived from the journalistic activities, they indicate that the individuals of the classes are realizing to some degree a certain personal satisfaction in growth.

A survey of the principles and practices of journalism in several secondary schools indicates that, with modifications, individual schools are following certain procedures which are generally established. Curriculum provisions for journalism vary, as they depend on conditions in individual schools. Because journalism contains problems which stimulate learning activity, the subject has become well established and recognized in secondary education with the result that various classes in journalism are being scheduled. Administrators of secondary schools in Southern California announce their intentions of increasing the number and types of classes in journalism in the school program as fast as expansion seems advisable and as rapidly as classes can be arranged.

It has been said that practically every secondary school in California employs at least one teacher of journalism. As a rule, these teachers are not graduates of schools of journalism but rather one-time English teachers who have gradually moved into the field of journalism. Many have learned how to teach journalism by actual practice while gleaning a knowledge of the subject from any available sources. These teachers seem to be doing effective work. It will be interesting to note how the advent of the teacher trained in the school of journalism will affect secondary-school journalism. Aside from a course or two in the supervision of school publications, schools of journalism offer few courses that provide actual training for teaching the subject. Whether such courses will be evolved will doubtless depend on how enduring journalism is in the secondary-school curriculum.

The present courses in journalism afford opportunities for pupils of all types. The work is exceedingly adaptable to the individual. For this reason the indications are that superior scholarship and intelligence quotients will never again be the criteria for admittance to membership in these classes. If it becomes necessary to reduce the number of pupils taking journalism, reduction will probably be made by making selections on the basis of individual differences and the needs of the individual for that particular type of work with a view to the results that he may obtain from it. As a matter of fact, the classes are already becoming too large to function for the best individual development.

The function of journalism is threefold—technical, practical, and social. It contributes to individual progress in independent self-direction. In addition to the acquisition of knowledge, opportunity is offered for the development of character, leadership, and general citizenship. Courses in journalism provide actual stimuli through real social situations. As knowledge is acquired, the pupil takes account of himself, begins to have confidence in his own ability, and discovers in himself a growing interest in his school world. His personality is unfolded. He is given practice in reflective thinking, concentration, and the exercise of initiative. He is encouraged to work independently and manifest self-initiated activity; thus, in his own world he begins to establish and maintain his ideals and exercise

himself as an individual. While at first the work is adapted to his needs, later he begins to adapt himself to the needs of the work. He often glimpses vocational possibilities in it for himself.

At present journalism is functioning educationally in secondary schools. Its rise and growth as an educational agency has been so rapid that one may well wonder if it is only a fad. The fact that the profession of journalism is already overcrowded would be the death knell of courses in journalism in secondary schools if vocational aims were the only ones to be realized from the subject. Indications are that the vocational phase of the work makes the strongest appeal to the pupils. How long, then, will journalism, stripped of its vocational glamor, continue to interest the pupils? Will they continue to take it because of its technical and social returns? Will educational administrators retain it in the curriculum for its remaining worthy qualities, or will they remove it to make way for some new subject that promises greater educational values? Whatever the answers to these questions may prove to be, the journalism of the present and immediate future seems to present great educational opportunities. After all, what more can be expected of any subject than that it shall be effective in its own time and place in the entire cycle of education?

## METHODS IN TEACHING HOW TO STUDY

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In a recent article Crawford made an appeal to secondary-school administrators to organize definite how-to-study courses in order to teach pupils correct methods of studying and "to develop actual habits of practicing the best study procedures."<sup>1</sup> There seems to be a diversity of opinion with regard to the content of a definite how-to-study course. Further, some educators question the advisability of introducing such a course into the curriculum because, it is claimed, habits of study learned in a specific course may not be those needed in other courses. If it were possible for pupils to study the subject matter of the regular courses under the direction of teachers whose primary concern would be to teach correct study procedures, the objectionable features mentioned might be overcome. Such a plan differs from the plan of the ordinary supervised-study period in that methods of study are emphasized rather than the mastery of specific types of subject matter. Thus, attention is focused on correct habits of study, while the subject matter of the regular courses is utilized in teaching these habits. This procedure might be profitably employed to supplement the work of supervised-study groups in regular classes.

An attempt has been made to put the plan described into effect in the Lyons Township High School at La Grange, Illinois. In this high school the day is divided into six one-hour periods. A pupil, therefore, may be registered in four subjects and still have two hours a day for study except for the time required for part-time courses, gymnasium classes, etc. During the time not actually spent in class-rooms additional assistance in studying is given as well as instruction in how to study. Pupils receive assistance in study from two sources: (1) in regular classes for supervised study under the direction of the

<sup>1</sup> C. C. Crawford, "The How-To-Study Course in the High School," *School Review*, XXXVIII (January, 1930), 17.

teachers of specific courses and (2) in extra study groups under the supervision of specialists in teaching how to study. Three men, each possessing a Master's degree, are in charge of the latter groups, and they are on the alert for situations in which successful habits of study may be taught.

Some significant features of the methods used by one supervisor of the study groups will be described.

1. An attempt is made to bring to the pupils a realization of the fact that they, and not the supervisor, are directly responsible for the success of their efforts. This point of view puts the responsibility for success or failure on the pupils themselves rather than on the supervisor. "A school," they are told, "is a place where pupils educate themselves with the assistance and co-operation of the teachers." In regular classes it is often assumed that the teachers alone are responsible for the outcome of the efforts of the pupils, whether or not the efforts are worthy. When the pupils realize that the work is not being done for the teachers but that it is a part of the educational program, in the pursuance of which they receive assistance from the teachers, they are progressing a step toward self-dependence. Since the supervisors of the study groups do not give marks and since the how-to-study course does not give credit toward graduation, the pupils in the groups soon learn to work for the purpose of creating self-dependence for further study rather than for the purpose of securing a stated number of credits.

2. Certain general helps in studying are taught to the group as a whole. It is not within the scope of this article to discuss the subject matter used in teaching correct habits of study; but, for the purpose of illustrating the methods, two general study helps may be mentioned.

Charts are displayed illustrating the sustained-application profiles of pupils who are successful and of those whose concentration of attention is faulty or spasmodic. Morrison states that "a record of sustained application is one of the first steps in the diagnosis of a remedial case assigned for special treatment."<sup>1</sup> A discussion of sustained-application profiles may well be used as a point of departure

<sup>1</sup> Henry C. Morrison, *The Practice of Teaching in the Secondary School*, p. 150. Chicago: University of Chicago Press, 1926.

in teaching correct habits of study to any group. The improvement in concentration of attention made by one pupil, as a result of this procedure, is illustrated in Figure 1. The concentration of attention as shown in Profile 1 was very irregular and spasmodic. Several interruptions occurred during the thirty minutes of study. The periods

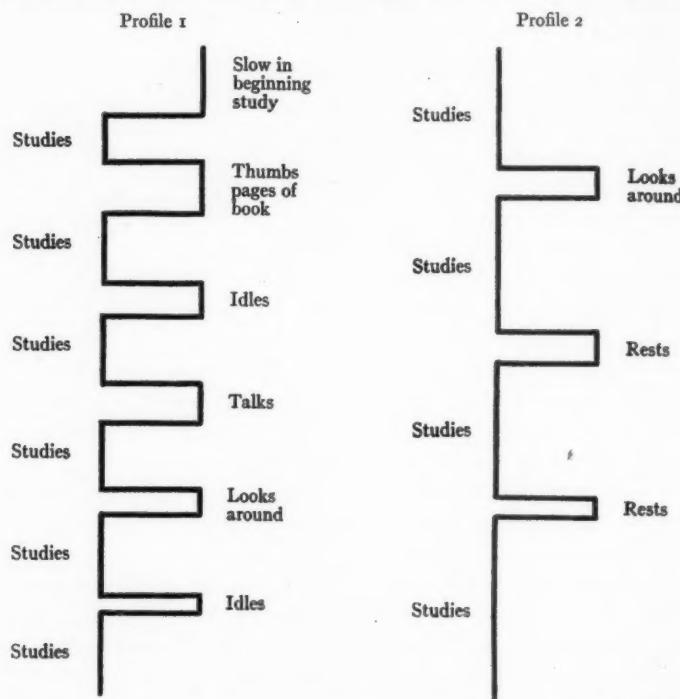


FIG. 1—Improvement in concentration of attention made by one pupil, as shown by the sustained-application profiles of two periods of study of thirty minutes each.

of concentration were very short, the longest being only four minutes in duration. When the pupil was shown the profile, he was surprised at the number of interruptions that had occurred for he thought he had been studying "hard." It was impressed upon him that progress could not be made in his school work until he was able to concentrate for longer periods of time and until he was able to study without as

many interruptions. Profile 2 shows the concentration of the same pupil a few weeks later. Satisfactory progress had been made, as the interruptions were fewer in number and the periods of concentration were longer than those shown in Profile 1. While there was still room for improvement in his ability to concentrate, the fact remains that the pupil was learning to apply himself diligently to the task of studying.

The pupils are requested to make tentative schedules for their programs of study, designating a time and a place for the study of each subject. Failure in secondary-school work is often caused by the fact that the program for study is not systematized. Pupils may find themselves rushed for time in which to study one of the subjects

TABLE I  
STUDY PROGRAM OF RALPH JONES

Period	Subject
1.....	Algebra
2.....	Study algebra
3.....	English
4.....	Latin
5.....	Study Latin
6.....	Science
At home.....	Study English and science and other subjects as needed

if they do not allow sufficient time for studying each lesson every day. They often wait to study a lesson until the period immediately preceding that in which the class convenes. If a tentative program is made and carried out as far as possible, these difficulties may be partly overcome by many pupils. A program made by one pupil is shown in Table I.

3. Pupils are encouraged to ask for assistance from the supervisor in methods of study. At first some pupils are reluctant to ask for aid; but, after they learn that the assistance given lightens their loads and makes their efforts more thorough, they hesitate no longer in consulting the supervisor, and he is looked on as a person who can guide them in more efficient methods of study. For example, if, as a result of a suggestion of the supervisor, a few minutes are saved by

using the whole method instead of the part method in memorizing, the pupil will not again hesitate to request aid from the supervisor. Experience shows that the number of requests for aid diminishes as the school year advances. Therefore, it is assumed that satisfactory progress is being made in the effort to teach pupils self-dependence in study.

4. No great attempt is made to change the habits of study of pupils of high scholastic standing, but a definite attempt is made to discover and correct the faulty habits of pupils of poor scholastic attainments. It is felt that an instructor should proceed with caution before a direct attempt is made to change the habits of study of those who are already successful, in so far as success is measured by the ability to secure marks in school work better than those secured by the average of the group. These are not the pupils toward whom a how-to-study campaign should be specifically directed. The pupils of poor scholastic attainments are those in need of assistance.

In La Grange the supervisors are constantly studying the school records in order to understand more fully the pupils in their charge. An attempt is made to learn what subjects each pupil is studying, the quality of his work, and the difficulties he encounters. If a student is failing in one or more subjects, periodic reports are sent to the supervisors on uniform cards, which are kept on file. Thus a cumulative record is obtained. An example of a periodic report follows.

Esther is very weak in spelling. She misspelled 30 out of 150 words in a theme handed in today. Many of these words are left as fragments—started but not successfully terminated. For example, "revolut" means revolutionary. This fragmentary construction is also evident in her sentence structure. In written work she often begins sentences which she does not finish. Very few punctuation marks are used, and the comma is her favorite mark. In grammar there is a pronounced deficiency in following the tense of verbs and in the relation of the pronoun to its antecedent. Her work is conspicuous for its lack of concentration and shows evidence that, before one word has been spelled, her mind is on something else. This same thing is true with regard to the sequence of ideas in her written work.

5. Special studies are made of remedial cases, and treatment is given according to the diagnosis made. Pupils often encounter difficulties other than those caused by poor habits of study. A health

problem, a social problem, or a problem of another type, in addition to poor habits of study, may be contributing toward failure in high school. If the problems of any pupil are of such a nature that their solution is beyond the scope of the work of the regular teacher, the case is considered remedial and is assigned to the special study supervisors. A case study is then made. Often the problems are but temporary, and in such cases treatment is given by the teachers of the regular courses. In remedial case work it is necessary to obtain adequate and reliable information with regard to the following points:<sup>1</sup>

*a) Physical examination.*—Is the pupil physically handicapped or partially incapacitated for normal progress in school because of some physical ailment present at the time the study is made?

*b) History of school progress.*—What information does the school history reveal with regard to the time at which the present problem appeared?

*c) Mental examination.*—What is the nature of the mentality of the pupil at the time of the study?

*d) Educational examination.*—What are the educational attainments in which the pupil is deficient? What is the nature of his appetitive mass or ideational background for learning?

*e) Health history.*—What information is found in the history of the health of the pupil which will assist the case worker in diagnosing the causes of the present physical difficulties, if any are present?

*f) Family history.*—What is the history of the family, especially with regard to the feeling of the family group toward established customs, ideals, and institutions in an American democracy?

*g) Social history.*—How has the social history of the pupil affected his attitude toward life?

These investigations are followed by diagnosis of the causes, formation of a tentative hypothesis as to the remedial measures needed, and case treatment according to the diagnosis made. Subsequent changes may be made in the treatment to meet later developments in the case history of the pupil.

Habits of study are difficult to measure except by the degree of success in school work, for the reason that no one can say definitely

<sup>1</sup> For a detailed plan of remedial case work, consult Henry C. Morrison, *op. cit.*, pp. 608-39.

that any one method or group of methods is the best for all individuals on all occasions. So many factors are involved in experimentation with habits of study that the writer has not yet found criteria of measurement for the methods or plans described in this article. However, use of the procedures described has given the following results: (1) Many pupils have overcome difficulties in studying. (2) Many pupils have made up deficient work. (3) Many pupils who made habitual failures have changed their attitude toward life. (4) The rate of failure in the Lyons Township High School has been substantially lowered.

No other claims are made for the plan discussed. This article has served its purpose if it has thrown any light on the how-to-study problem or if it calls forth discussion with regard to methods of teaching study procedures or habits of study.

## SUMMARY OF INVESTIGATIONS OF EXTRA-CURRICULUM ACTIVITIES IN 1929. I

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During the year 1929 substantial additions were made to the literature dealing with extra-curriculum activities. Special interest attaches to the articles, monographs, and books in which the treatment of the subject is critical or quantitative in nature and of more than local significance. In the following pages an annotated bibliography is given of forty-six studies of such character. Studies of extra-curriculum activities in college have been included with those of activities in the high school because of the obviously close relation of the two institutions and because a large amount of the most significant material is concerned with conditions in colleges. In an article which will appear in a later issue of this journal a summary will be given of the conclusions reached in some of the studies, especially in those in which the treatment is of a quantitative nature.

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#### 2. BANTA, FAY M.

"School Assemblies and Clubs," *Journal of Educational Method*, VIII (January, 1929), 187-93.

Discusses the values of, and describes plans for, assemblies and clubs in the elementary school. Gives brief descriptions of seventeen successful programs for assemblies.

## 3. BARR, A. S.

"The Training of Teachers for the Direction of Extra-curricular Activities," *Educational Administration and Supervision*, XV (May, 1929), 350-55.

Describes the need for teacher-training in the administration of extra-curriculum activities, the attitudes of administrative officials, and the types of training available at teachers' colleges.

## 4. BICKHAM, MARTIN HAYES.

"Making Social Analyses of College Communities," *Journal of Educational Sociology*, II (May, 1929), 514-19.

Describes a technique for analyzing college communities, the object of which is to acquire new social intelligence that will facilitate the social adjustment of individual students.

## 5. BOWDEN, A. O.

"Our 396 Major Social Problems and Issues and the Schools," *Journal of Educational Sociology*, II (March, 1929), 397-411.

Gives illustrative examples of a large number of problems toward the solution of which substantial contributions should be made by those who have had proper training through participation in extra-curriculum activities.

## 6. BROWN, AROLD W., and LAING, HARLOW E.

"The Truth about the Band and Orchestra in the Schools," *Education*, L (December, 1929), 223-28.

A vigorous statement of the need of putting the instruments of the school musical organizations on the C and F basis in order to extend the possibility of the use of the instruments with piano accompaniments in the home and thus to provide a means of training for leisure.

## 7. BUNDY, SARAH ELIZABETH.

"Giving the Home Room Fair Consideration," *School Review*, XXXVII (December, 1929), 780-86.

Discusses types of programs for home rooms and presents a simple formula for rating the achievements of the home room for purposes of comparison with the achievements of other home rooms.

## 8. BUTLER, CHARLES H.

"The High-School Annual Rejuvenated," *English Journal*, XVIII (February, 1929), 119-28.

States eight principles the observance of which will increase the value of publishing annuals and remove certain difficulties in their production. Applies the principles in a specific case.

## 9. CHAPIN, F. STUART, assisted by O. MYKING MEHUS.

*Extra-Curricular Activities at the University of Minnesota*. Minneapolis, Minnesota: University of Minnesota Press, 1929. Pp. x+140.

An extensive cross-section survey of extra-curriculum activities at the University of Minnesota participated in by students and by leaders, organizations, and

alumni. Gives valuable data on the lives of organizations, the extent and intensity of participation, and the relation of participation to scholarship and to subsequent social activities in the community.

10. CONSTANCE, CLIFFORD L.

"Greeks of the Campus," *School and Society*, XXX (September 21, 1929), 409-14.

A careful statistical comparison of fraternity and non-fraternity men and women in college with respect to intelligence, high-school records, and marks received in the first term. Describes a chart for comparing the scholarship records of the members of a fraternity with the records of members of other fraternities.

11. DEAM, THOMAS (CHAIRMAN).

"Report of the Sub-Committee on Extra-Curricular Activities," *North Central Association Quarterly*, III (March, 1929), 542-88.

Defines twelve types of activities and under each lists many specific pupil experiences. Evaluates Type One, "Participation in the Organization, Management, and Control of the School," in terms of the contributions to health, leisure, and social and vocational training. Chiefly valuable for the description of a technique of evaluation that may be used on a wide scale.

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"What Are the Vocational Possibilities in Extra-Curriculum Activities?" *School Review*, XXXVII (December, 1929), 767-70.

A discussion of ways in which several extra-curriculum organizations may be used to direct pupils toward particular vocations.

13. EELLS, WALTER CROSBY, and DAVIS, HAROLD McDONALD.

"The Junior-College Transfer in University Athletics," *School Review*, XXXVII (May, 1929), 371-76.

A study made in the three largest universities in California which shows the percentage of men students on the eligibility lists of the Pacific Coast Intercollegiate Athletic Conference who entered the universities from junior colleges compared with the corresponding percentage who entered from high schools.

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"A Functioning Boys' Club," *School Review*, XXXVII (October, 1929), 624-26.

Compares the work of a boys' club of broad scope with that of a student council.

15. HALLMAN, MALCOLM SCOTT.

"What Play?" *English Journal*, XVIII (April, 1929), 320-29.

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"Community Cooperation in Building up the High-School Band," *School Life*, XV (September, 1929), 6-7.

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Describes the history, activities, and membership of the Junior Red Cross and the instructional materials which it provides.
19. HINDMAN, DARWIN A.  
"Athletics and Scholarship at the Ohio State University," *School and Society*, XXX (July 30, 1929), 93-96.  
Compares the four-year records of 155 athletes with those of 1,172 non-athletes with respect to several criteria of academic achievement.
20. HUTCHINSON, MARK E.  
"College Athletics and Scholarship," *School and Society*, XXIX (February 2, 1929), 151-52.  
Compares the four-year records of forty athletes with those of sixty-seven non-athletes at Cornell College, Mount Vernon, Iowa, with respect to several criteria of academic achievement.
21. JOHNSON, CHARMIAN, and EGER, CARRIE.  
"Journalistic Activities in the Junior High School," *Educational Method*, IX (December, 1929), 151-54.  
Discusses the value of a school page in a local newspaper as a means of motivating English work.
22. KAULFERS, WALTER.  
"Practical Aspects of the School-Scout Program," *Education*, XLIX (January, 1929), 268-77.  
A critical discussion of the policies of "incorporation" and "co-operation" in administering the Boy-Scout program.
23. KNOX, JAMES E., and DAVIS, ROBERT A.  
"The Scholarship of University Students Participating in Extra-curricular Activities," *Educational Administration and Supervision*, XV (October, 1929), 481-93.  
Compares the scholarship of participants in extra-curriculum activities, according to sex and number of activities engaged in, with that of non-participants at the University of Colorado.
24. LEHMAN, HARVEY C., and WITTY, PAUL A.  
"Sex Differences in Vigorous Bodily Activity," *Journal of Educational Method*, VIII (March, 1929), 322-29.  
A comparison of the extent to which boys and girls from eight to twenty-two years of age participate voluntarily in vigorous play and games.

25. LUMSDEN, FLORENCE M.  
"An Assembly Program in a Junior High School," *Journal of Educational Method*, VIII (April, 1929), 413-16.  
Describes an assembly program including various types of work and extensive pupil participation.

26. MCCUEN, THERON L.  
"Leadership and Intelligence," *Education*, L (October, 1929), 89-95.  
Compares the intelligence scores of the leaders of fifty-eight organizations of different types at Stanford University with the average scores of their groups.

27. MCNEIL, ROBERT H.  
"Training on College Newspapers," *School and Society*, XXIX (March 30, 1929), 419-20.  
Discusses the value of experience gained through work on college newspapers and gives facts concerning the number of such papers in the country, the frequency of issue, the granting of academic credit for work done on the papers, and monetary compensation given.

28. MAHONEY, ROBERT H.  
"The Boys' Club in an Urban High School," *School and Society*, XXIX (January 19, 1929), 89-92.  
Describes a plan for supplementing student government with a boys' club.

29. MAY, ERIC OSCAR.  
"One Fee for All Pupil Activities," *School Review*, XXXVII (April, 1929), 304-6.  
Discusses the advantages of a single fee to cover attendance at, and participation in, all activities.

30. MONROE, WALTER S.  
"The Effect of Participation in Extra-Curriculum Activities on Scholarship in the High School," *School Review*, XXXVII (December, 1929), 747-52.  
Compares the intelligence and scholarship of participants in extra-curriculum activities during semesters of participation and non-participation with the intelligence and scholarship of non-participants in four schools.

31. MYERS, W. H.  
"The Financial Control of Student Activities," *American School Board Journal*, LXXIX (November, 1929), 48, 146.  
Describes the use of a general treasury and a budget supervised by a central finance committee as a means of controlling a runaway athletic spirit.

32. PLATTS, P. K.  
"Moral Significance of the Social Organization of Schools," *Educational Method*, IX (November, 1929), 107-9.  
A critical comparison of the class, or grade, organization with the "house" plan of the English secondary schools.

33. ROEMER, JOSEPH.  
"Comparison of Advantages and Disadvantages in Developing Extra-curricular Activity Program in Large and Small High Schools," *School Life*, XV (December, 1929), 66-68.  
An evaluation, made by 105 students in a class studying extra-curriculum activities, of 64 advantages and disadvantages of these activities.

34. ROGERS, FREDERICK RAND.  
"Olympics for Girls?" *School and Society*, XXX (August 10, 1929), 190-94.  
A critical discussion of the desirability of interscholastic and Olympic athletic contests for girls and women in the light of observations and scientific data concerning their mental and physical traits.

35. ROGERS, FREDERICK RAND.  
"Future of Extra-curricular Activities," *American Physical Education Review*, XXXIV (December, 1929), 553-57.  
A strong statement of the need of giving pupils more freedom from adult control and more responsibility in the management of their organizations than they now possess.

36. RYNEARSON, EDWARD.  
"Purpose and Organization of the National High School Honor Society," *School Life*, XV (October, 1929), 24-26.  
Describes the origin, need, number of members, objectives, and form of organization of the junior and senior divisions of the National High School Honor Society.

37. SAVAGE, HOWARD J., and OTHERS.  
*American College Athletics*. Bulletin Number Twenty-three. New York: Carnegie Foundation for the Advancement of Teaching, 1929. Pp. xxii+384.  
A very significant contribution based on an extensive and comprehensive survey of facts and on visitation of more than one hundred institutions in the United States and Canada. Chapters iv, vi, and x, "Athletics in American Schools," "Athletic Participation and Its Results," and "The Recruiting and Subsidizing of Athletes," are of special value to those interested in secondary education.

38. SHANNON, J. R.  
"The Post-School Careers of High-School Leaders and High-School Scholars," *School Review*, XXXVII (November, 1929), 656-65.  
A comparison of the careers of leaders in student activities and of honor-roll students graduated from 1914 to 1919 with the careers of a random group with respect to several criteria of "success in life."

39. SIMS, VERNER MARTIN.  
"The Status of Hazing in American Colleges," *School and Society*, XXIX (February 9, 1929), 201-4.

A statistical study showing the relation of hazing in fifty-six institutions to the administrative policies governing hazing and to the degree of student participation in control.

40. SMITH, GEORGE M.

"The Aims and Values of Intramural Athletics," *Education*, LXIX (March, 1929), 406-14.

Discusses the value of athletics and gives data on the percentages of boys engaged in athletics in two Seattle high schools.

41. SPAULDING, F. T.

"What Extra-curricular Activities Ought a Good School Not To Offer?" *Educational Method*, IX (December, 1929), 140-50.

A critical discussion of seven criteria on the basis of which extra-curriculum activities may be selected or rejected.

42. STURTEVANT, SARAH M., and STRANG, RUTH.

"Activities of High School Girls," *Teachers College Record*, XXX (March, 1929), 562-71.

A study of the twenty-four-hour schedules of different groups of girls.

43. TOWELL, J. F.

"The Social and Educational Status of the Pupils in a Residential Suburban Community," *School Review*, XXXVII (January, 1929), 49-58.

Gives statistical data with regard to the relation of participation in extra-curriculum activities to scholarship, continuation of the pupil's school career, and occupational status of father.

44. VAN WAGENEN, BEULAH CLARK.

*Extra-Curricular Activities in the Colleges of the United Lutheran Church in America.* Teachers College Contributions to Education, No. 380. New York: Teachers College, Columbia University, 1929. Pp. 156.

Presents facts with regard to the non-athletic extra-curriculum activities in the Lutheran colleges, relates these facts to modern educational theory, and formulates tentative standards for the organization and development of such activities in general.

45. WEGNER, H. C.

"The High School Honor Roll," *Journal of Educational Method*, VIII (June, 1929), 515-18.

Describes a plan of weighting letter grades qualitatively and quantitatively, which can be used in selecting pupils for the honor roll.

46. WELLER, D. S.

"The Status of Dancing in the Larger Indiana High Schools," *School Review*, XXXVII (March, 1929), 215-16.

A tabulation of the answers of fifty-two high schools in Indiana to questions concerning their policy with respect to dancing in the schools.

## PROFESSIONAL BOOKS

Six professional books dealing with extra-curriculum activities made their appearance during 1929. The first is *Assemblies for Junior and Senior High Schools* by Eileen H. Galvin and Eugenia M. Walker (New York: Professional and Technical Press, 1929), which includes two chapters on the values and the administration of assemblies and seventeen chapters on types of assemblies. The second, *Commencement* by Gertrude Jones (New York: A. S. Barnes and Company, 1929), is a systematic and comprehensive presentation of the uses and activities of the type of school work mentioned in the title. The third is *School Clubs: Their Organization, Administration, Supervision, and Activities* by Harry C. McKown (New York: Macmillan Company, 1929), which is an elaborate treatment of school clubs and their relation to other aspects of school work. The fourth, *Financing Extra Curricular Activities* by Harold D. Meyer and Samuel McKee Eddleman (New York: A. S. Barnes and Company, 1929), describes the methods of raising, distributing, and accounting for the money used by organizations of pupils. The fifth is *Readings in Extra-curricular Activities* by Joseph Roemer and Charles Forrest Allen (Richmond, Virginia: Johnson Publishing Company, 1929), which includes over eight hundred pages of selected readings organized in twenty-two chapters. Accompanying the volume just named is a *Syllabus of a Course in Extra-curricular Activities* by the same authors and publisher, containing 120 pages.

[*To be concluded*]

## SCORING THE REARRANGEMENT OR CONTINUITY TEST

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The continuity test has been the subject of some discussion in several issues of this journal.<sup>1</sup> As applied to the chronological order of historic events, it is a special adaptation of the rearrangement test. The latter has many applications: for example, determining a person's knowledge of the relative gravity of moral offenses or of the relative importance of the symptoms of a disease; comparing the interests of an individual with those of a group accepted as a criterion; and judging a person's grasp of relative statistical facts, such as heights of mountains, populations of cities or countries, birth and death rates of different groups, shipping tonnage of different countries, and yields per acre of various crops.

Wilson and Nesmith both seem to feel that the score on such a test should depend on the number of correct relations indicated by the pupil. The writers believe that this principle is only an approximation of the correct method. They submit that the best measure of the knowledge of the pupil is the correlation between his ranking and the correct ranking. They do not share Worcester's belief that the rearrangement test cannot be scored fairly and that its use must, therefore, be abandoned.

The correlation between ranked data is given by Spearman's well-known formula, which follows:

$$\rho = 1 - \frac{6 \sum d^2}{N^3 - N}$$

<sup>1</sup> a) Howard E. Wilson, "The Continuity Test in History-Teaching," *School Review*, XXXIV (November, 1926), 679-84.

b) Robert W. Nesmith, "Scoring the Continuity Test," *School Review*, XXXVII (December, 1929), 764-66.

c) Howard E. Wilson, "Further Comments on the Scoring of Continuity Tests," *School Review*, XXXVIII (February, 1930), 115-23.

d) D. A. Worcester, "Still Further Comments on the Scoring of the Continuity Test," *School Review*, XXXVIII (June, 1930), 462-66.

Since correlation coefficients range from  $-1$  to  $+1$  and since it is ordinarily desired that test scores should range from  $0$  to  $100$  per

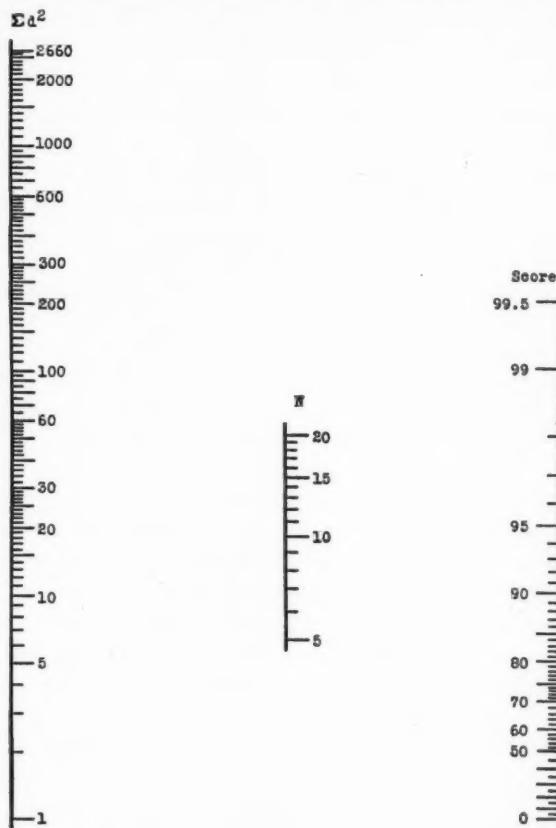


FIG. 1.—Nomograph for determining percentage scores on continuity tests

cent with most of the scores lying in the upper 50 per cent, this formula may be transformed to read:

$$\text{Percentage score} = 100 - \frac{300 \Sigma d^2}{N^3 - N}$$

$N$  is the number of items in the test;  $d$  is the difference between the student's ranking of an item and the correct ranking;  $\Sigma$  indicates the process of adding all the squares of the differences.

The second formula given retains all the advantages of the coefficient of correlation as to accuracy of representation. The range of possible scores is from 0 to 100 per cent. Scores above 50 per cent represent positive correlations; scores below 50 per cent, negative correlations. The rankings to be expected from a pupil who knew nothing at all about the test and assigned ranks by sheer guesswork would yield a score of 50 per cent.

The computation of a rank correlation by either of the two formulas for each pupil in a class would ordinarily involve an undue

TABLE I  
CORRECT ORDER OF A FIVE-ITEM TEST, A PUPIL'S  
POSSIBLE NUMBERING, AND THE SQUARES  
OF THE DIFFERENCES

Item	Correct Order	Pupil's Order	Square of Difference ( $d^2$ )
1. The Emancipation Proclamation.....	4	3	1
2. Lincoln-Douglas Debates.....	2	4	4
3. Outbreak of the Civil War.....	3	5	4
4. Passage of the Kansas-Nebraska Act.....	1	1	0
5. End of the Civil War.....	5	2	9
$\Sigma d^2$ .....			18

amount of labor on the part of the teacher. To reduce the amount of work, the nomograph shown in Figure 1 has been prepared. The procedure of scoring a paper is as follows:

1. Match a key against the pupil's responses. The order of items in the key is immaterial; consequently the necessity of rearranging the items in serial order is avoided.
2. For each item find the difference between the correct rank and the rank assigned by the pupil, square this difference, and record the value on the pupil's paper. In subtracting, it is not necessary to take account of the sign of the difference as all squares are positive.
3. Add the squares. This sum is  $\Sigma d^2$ .
4. On the scale at the left of the nomograph find the value of

$\Sigma d^2$ . On the center scale find the value of  $N$  (the number of items in the test). Connect these two points by means of a straightedge—a stretched string or rubber band or, better, a hair line scratched on a piece of transparent celluloid. Extend this line to cut the scale at the right. At this point read the percentage score.

Table I gives an example of a five-item test taken from Wilson's second article.<sup>1</sup> The sum of the squares of the differences ( $\Sigma d^2$ ) is 18, and the number of items is 5. When the procedure described is followed, the pupil's score determined from the nomograph is 55 per cent.

<sup>1</sup> Howard E. Wilson, "Further Comments on the Scoring of Continuity Tests," *School Review*, XXXVIII (February, 1930), 122.

## A COMPARISON OF FOUR METHODS OF SCORING THE CONTINUITY TEST

LENORE JOHN

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The proper method of scoring the continuity, or rearrangement, test has been the subject of discussion in this journal and elsewhere. Nesmith<sup>1</sup> has proposed one method of scoring. Wilson<sup>2</sup> has proposed a different method. Sangren and Woody<sup>3</sup> include a test of this type as an organization test in their reading test and use a third method of scoring, which is similar to that proposed by Odell<sup>4</sup> and gives equivalent results.

Since the problem of scoring a test of this kind is essentially a problem of securing a measure of the extent to which the series of ranks assigned by the pupil agree with the correct series, it would seem that an adequate score could be obtained by computing the Spearman rank coefficient of correlation between the ranks assigned by the pupil and the correct ranks. While the calculation of this coefficient is relatively simple, it may be too complicated to be used widely for practical purposes. It does, however, provide a reasonable criterion for the evaluation of the methods of scoring proposed for classroom use.

In order to determine which of the three proposed methods yields scores which agree most closely with the scores secured by the use of the Spearman formula and to determine to what extent the scores assigned by each method agree with those assigned by the other two methods, a test was devised and given to fifty-five pupils in fifth-

<sup>1</sup> Robert W. Nesmith, "Scoring the Continuity Test," *School Review*, XXXVII (December, 1929), 764-66.

<sup>2</sup> Howard E. Wilson, "Further Comments on the Scoring of Continuity Tests," *School Review*, XXXVIII (February, 1930), 115-23.

<sup>3</sup> Paul V. Sangren and Clifford Woody, *Sangren-Woody Reading Test*. Yonkers-on-Hudson, New York: World Book Co., 1927.

<sup>4</sup> C. W. Odell, *Traditional Examinations and New-Type Tests*, pp. 406-8. New York: Century Co., 1928.

grade history classes. The test was composed of eight items and related to the unit "How the Ancient World Became Roman." Each test paper was scored by the methods used by Wilson, Nesmith, and Sangren and Woody and by computing the Spearman rank coefficients of correlation.

The steps involved in Wilson's method of scoring are shown for a sample paper in Table I. The method is described by him as follows:

Transpose the pupil's markings in such a manner that they correspond with a key which places the items of the test in numerical order. Then cross out the figure 1 in the pupil's marking and count the number of items below it. Cross out the pupil's figure 2 and count the number of items below it not previously

TABLE I  
SCORING OF AN EIGHT-ITEM CONTINUITY TEST  
BY WILSON'S METHOD

Correct Order	Pupil's Order	Numerical Order	Pupil's Order Revised	Tabulation Column
3.....	8	1	1	7
8.....	6	2	3	5
5.....	2	3	8	0
1.....	1	4	7	0
6.....	4	5	2	3
2.....	3	6	4	2
4.....	7	7	5	1
7.....	5	8	6	0
Score.....				18

crossed out. Cross out the pupil's figure 3 and count the number of items below it not crossed out. When all the items of the test have thus been crossed out, add the figures resulting from the various counts in order to secure the pupil's score, that is, the number of relations he has recognized and marked correctly.<sup>1</sup>

This method of scoring is based on the assumption that each item in the test has a correct relation to every other item and that the number of relations involved in a test of  $n$  items is therefore the number of combinations of  $n$  things taken two at a time, or  $\frac{n(n-1)}{2}$ .

The steps involved in Nesmith's method of scoring are shown for a sample paper in Table II. He describes the method as follows:

The pupils exchange their papers for marking. In marking the papers, the pupils first give each item its correct number. Then each pupil asks himself: Is

<sup>1</sup> Howard E. Wilson, *op. cit.*, p. 122.

2 below 1, that is, anywhere below 1, not necessarily immediately below? Is 3 below 2? Is 4 below 3? Is 5 below 4? There are eight such questions which the pupil asks himself, and for each question the answer to which is affirmative he records  $12\frac{1}{2}$ .<sup>1</sup>

This method differs from Wilson's method in that no account is taken of the relation of a given item to any items except those which immediately precede and follow it. Accordingly, the number of relations to be scored is  $n-1$ , and the credit given for each correct

TABLE II  
SCORING OF AN EIGHT-ITEM CONTINUITY TEST  
BY NESMITH'S METHOD

Correct Order	Pupil's Order	Numerical Order	Pupil's Order Revised	Tabulation Column
3.....	8	1	1	.....
8.....	6	2	3	0.0
5.....	2	3	8	0.0
1.....	1	4	7	0.0
6.....	4	5	2	14.3
2.....	3	6	4	14.3
4.....	7	7	5	14.3
7.....	5	8	6	14.3
Score.....				57.2

relation is determined by dividing 100 by  $n-1$ . The credit of  $12\frac{1}{2}$  to which Nesmith refers is the amount appropriate for a nine-item test.

The method which is used by Sangren and Woody for scoring the organization test in their reading test may be summarized in the following formula:

$$S = \frac{D}{2} - \frac{\Sigma d}{2}$$

$S$  is the score,  $d$  is the difference between the rank assigned by the pupil and the correct rank for each item, and  $D$  is the greatest possible sum of the differences, that is, the sum of the differences which would be secured if the correct order were exactly reversed, a series the correct order of which is 1, 2, 3, 4, 5, 6, 7, 8 being numbered 8, 7, 6, 5, 4, 3, 2, 1. The steps involved in the use of this method are shown in Table III.

<sup>1</sup> Robert W. Nesmith, *op. cit.*, pp. 765-66.

The formula for the Spearman rank coefficient is as follows:

$$\rho = 1 - \frac{6 \sum d^2}{N(N^2 - 1)}$$

In this case  $\rho$  is the score,  $N$  is the number of items in the test, and  $d$  is the difference between the rank assigned by the pupil and the cor-

TABLE III  
SCORING OF AN EIGHT-ITEM CONTINUITY TEST  
BY SANGREN AND WOODY METHOD

Correct Order	Pupil's Order	Difference
3.....	8	5
8.....	6	2
5.....	2	3
1.....	1	0
6.....	4	2
2.....	3	1
4.....	7	3
7.....	5	2
Sum of differences.....		18*

$$* \text{Score} = \frac{32}{2} - \frac{18}{2} = 7$$

TABLE IV  
CORRELATION OF PUPIL'S ORDER WITH CORRECT ORDER  
IN AN EIGHT-ITEM CONTINUITY TEST CALCULATED  
BY SPEARMAN'S METHOD

Correct Order	Pupil's Order	Difference	Square of Difference
3.....	8	-5	25
8.....	6	2	4
5.....	2	3	9
1.....	1	0	0
6.....	4	2	4
2.....	3	-1	1
4.....	7	-3	9
7.....	5	2	4
Sum of squares of differences.....		56*	

$$* \rho = 1 - \frac{6 \times 56}{8 \times 63} = .33$$

rect rank for each item. The steps involved in the computation are shown for a sample test paper in Table IV.

The scores obtained by use of the Wilson, Nesmith, and Sangren and Woody methods were correlated with the Spearman coefficients as a criterion of the accuracy of the method of scoring and were also intercorrelated. The resulting product-moment coefficients are shown in Table V. The correlation between the Nesmith scores and the Spearman scores is not sufficiently high for the Nesmith method to be regarded as a satisfactory method of scoring. The correlation of .509 between the Wilson scores and the Nesmith scores and the correlation of .307 between the Sangren scores and the Nesmith

TABLE V  
CORRELATIONS OF SCORES SECURED BY USE OF WILSON,  
NESMITH, SANGREN AND WOODY, AND  
SPEARMAN METHODS

Scores	Product-Moment Coefficients
Nesmith-Spearman.....	.377 $\pm$ .078
Wilson-Spearman.....	.978 $\pm$ .004
Sangren-Spearman.....	.938 $\pm$ .011
Wilson-Sangren.....	.930 $\pm$ .012
Wilson-Nesmith.....	.509 $\pm$ .067
Sangren-Nesmith.....	.307 $\pm$ .083

scores do not indicate close agreement between the scores assigned by the use of the Nesmith method and those assigned by the use of either of the other two methods. Correlating the Wilson scores with the Spearman scores and the Sangren scores with the Spearman scores yielded coefficients of .978 and .938, both of which are higher than the reliability coefficients usually obtained for tests. Hence, either method may be regarded as a satisfactory method for classroom use. The correlation of .930 between the Wilson scores and the Sangren scores indicates close agreement between the scores assigned by the use of these two methods. The greater simplicity of the Sangren and Woody method makes it preferable for practical use.

## LEADING TERMS IN EDUCATIONAL LITERATURE

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The purpose of the study described in this article was to determine the educational terms which secondary-school teachers must know in order to understand present-day educational literature.

An analysis was made of the articles dealing with secondary education which appeared in the *School Review* during the years 1913, 1920, 1926, and 1927. Only those articles which are of a somewhat technical nature were considered. The frequency of occurrence of the educational terms used in these articles was found. However,

TABLE I  
TOTAL NUMBER OF ARTICLES APPEARING IN THE "SCHOOL REVIEW" IN 1913, 1920, AND 1926 AND 1927 AND NUMBER AND PERCENTAGE OF ARTICLES ANALYZED

Year	Total Number of Articles	Number of Articles Analyzed	Percentage of Articles Analyzed
1913.....	49	17	35
1920.....	48	22	46
1926 and 1927.....	130	63	48

no objective criterion was available to determine the educational terms which should be included.

Table I indicates that increasing percentages of articles dealing in somewhat technical language with specific problems in secondary education were found in the different years. Thirty-five per cent of the articles which appeared in 1913 were analyzed, while 48 per cent of those which appeared in 1926 and 1927 were included in the study.

Table II shows the sixteen educational terms which occurred five or more times in the seventeen articles appearing in 1913 which were analyzed. "Median" has the highest frequency (31), and

"average" is next with a frequency of 26. In Table III are given the terms found five or more times in the twenty-two articles appearing in 1920 which were analyzed. Forty-five terms were found in the articles in 1920 as compared with sixteen in the articles in 1913. "Vocational" has a frequency of 84, and "intermediate school" follows with a frequency of 69. Table IV gives the forty-seven educational terms found ten or more times in the sixty-three articles appearing in 1926 and 1927 which were analyzed. Since

TABLE II  
SIXTEEN EDUCATIONAL TERMS WHICH OCCURRED FIVE OR MORE  
TIMES IN SEVENTEEN ARTICLES APPEARING IN 1913 IN THE  
"SCHOOL REVIEW" RANKED ACCORDING TO THEIR FREQUENCY  
OF OCCURRENCE

Term	Frequency of Occurrence	Rank
Median.....	31	1
Average.....	26	2
Professional.....	20	3
Percentile.....	18	4.5
Distribution.....	18	4.5
Correlation.....	15	6
Statistics.....	14	7
Percentage.....	12	8.5
Tertile.....	12	8.5
Rank.....	10	10
Analysis.....	8	12.5
Data.....	8	12.5
Technical.....	8	12.5
Variation.....	8	12.5
Supervision.....	7	15
Tenure.....	6	16

articles appearing for two years were included in this group, no term was included which was found fewer than ten times. Two terms in this group occurred more than two hundred times—"curriculum" and "intelligence quotient." It will be noted from the data given in these three tables that more terms with a high frequency were found in the articles written in recent years.

Table V gives the fifteen terms which occurred more than fifty times in the articles analyzed for 1926 and 1927 and the number of times the same terms were found in articles appearing in 1913 and in 1920. In the case of all but four of these terms an increase in frequency occurs with each succeeding period of time.

TABLE III

FORTY-FIVE EDUCATIONAL TERMS WHICH OCCURRED FIVE OR MORE TIMES IN TWENTY-TWO ARTICLES APPEARING IN 1920 IN THE "SCHOOL REVIEW" RANKED ACCORDING TO THEIR FREQUENCY OF OCCURRENCE

Term	Frequency of Occurrence	Rank
Vocational.....	84	1
Intermediate school.....	69	2
Curriculum.....	52	3
Unit.....	44	4
Classification.....	38	5
Average.....	36	6
Intelligence.....	33	7
Supervision.....	32	8
Percentage.....	30	9
Median.....	29	10
Correlation.....	27	11
Study-coach group.....	25	12
Rank.....	23	13
Ability grouping.....	21	14.5
Supervised study.....	21	14.5
Self-government.....	19	16
Questionnaire.....	17	17
Electives.....	16	18
Distribution.....	15	19
Prevocational.....	12	20.5
Probability.....	12	20.5
Individual differences.....	11	22.5
Technical.....	11	22.5
Diagnosis.....	10	24
Ungraded vocational.....	9	27
Tabulation.....	9	27
Percentile.....	9	27
Quartile.....	9	27
Variation.....	9	27
Intelligence quotient.....	8	31.5
Data.....	8	31.5
Differentiation.....	8	31.5
Pupil participation.....	8	31.5
Cumulative.....	7	34
Participation.....	6	36.5
Adolescence.....	6	36.5
Composite.....	6	36.5
Project.....	6	36.5
Rating scale.....	5	42
Non-promotion group.....	5	42
Dynamic traits.....	5	42
Americanization.....	5	42
Home room.....	5	42
Homogeneous.....	5	42
Trial-promotion group.....	5	42

TABLE IV

FORTY-SEVEN EDUCATIONAL TERMS WHICH OCCURRED TEN OR MORE TIMES IN SIXTY-THREE ARTICLES APPEARING IN 1926 AND 1927 IN THE "SCHOOL REVIEW" RANKED ACCORDING TO THEIR FREQUENCY OF OCCURRENCE

Term	Frequency of Occurrence	Rank
Curriculum	221	1
Intelligence quotient	210	2
Percentage	148	3
Vocational	143	4
Median	122	5
Average	103	6
Correlation	91	7
Extra-curriculum	87	8
Achievement	73	9
Intelligence	67	10
Standardization	66	11
Supervised study	61	12
Mental age	60	13
Mean	57	14
Distribution	55	15
Supervision	49	16
Variation	48	17
Constant	46	18.5
Participation	46	18.5
Rank	40	20
Questionnaire	38	21
Range	36	22.5
Variable	36	22.5
Pupil participation	35	24.5
Student hour	35	24.5
Deviation	34	26
Composite	32	27
Quartile	31	28
Chronological age	27	29.5
Directed study	27	29.5
Classification	26	31
Data	23	32
Statistics	18	34
Homogeneous	18	34
Standard deviation	18	34
Extra-school	15	36.5
Time allotment	15	36.5
Teaching load	14	39.5
College preparation	14	39.5
Electives	14	39.5
Frequency	14	39.5
Percentile rank	13	42
Heterogeneous	12	43.5
Life-career motive	12	43.5
Probable error	11	45
Dalton Plan	10	46.5
Tabulation	10	46.5

During the school year 1927-28 a group of students in an advanced class in education at the Colorado State Teachers College made an analysis of articles appearing in educational journals during the year in an attempt to discover the educational terms which teachers need to know. The investigation of these students dealt with articles of a general character as contrasted with the writer's analysis of articles dealing only with secondary education. However, all but one of the twelve terms ranking highest in the students' investigation appear in Table V of this study.

TABLE V  
FIFTEEN EDUCATIONAL TERMS WITH A FREQUENCY OF OCCURRENCE OF MORE  
THAN 50 IN 1926 AND 1927 AND THEIR FREQUENCY OF  
OCCURRENCE IN 1913 AND IN 1920

Term	Frequency of Occurrence in 1926 and 1927	Frequency of Occurrence in 1920	Frequency of Occurrence in 1913
Achievement.....	73	1	0
Average.....	103	36	26
Correlation.....	91	27	15
Curriculum.....	221	52	3
Distribution.....	55	15	18
Extra-curriculum.....	87	4	0
Intelligence.....	67	33	0
Intelligence quotient.....	210	8	0
Mean.....	57	0	0
Median.....	122	29	31
Mental age.....	60	0	0
Percentage.....	148	30	12
Standardization.....	66	1	0
Supervised study.....	61	21	0
Vocational.....	143	84	4

#### CONCLUSIONS

While this study was not sufficiently inclusive to justify general conclusions as to the terms that are most frequently used by educational writers, some conclusions can be drawn.

1. The technical terms used in educational literature do not remain the same over a period of years.
2. The number of educational terms which secondary-school teachers must know in order to understand adequately articles dealing with education is larger today than it was in past years.
3. Many of the educational terms which are frequently used are statistical terms.

## Educational Writings

### REVIEWS AND BOOK NOTES

*A comprehensive survey of the social sciences.*—One of the most impressive developments in the recent history of the sciences, both natural and social, is the growth of a general recognition of the necessity of bridging the gaps that in the past have separated the various special lines of inquiry. It is especially true in the social sciences, all of which have to do with man and his activities, that the facts and conclusions of all these sciences must be available to some extent in the thinking of any student who hopes to reach a valid generalization in any one line of inquiry dealing with human life. The growing awareness of the interrelation of all social sciences has led a notable group of scholars to unite in the preparation of a comprehensive work which aims to bring together in fifteen large volumes the results of all the social sciences.

This project was initiated in 1923 and gradually matured to the point where the first volume<sup>1</sup> appeared early this year. The encyclopedia is an international enterprise. Leading scholars of all nationalities are contributing, and, though the language of the publication is English, the range of materials included is far broader than American scholarship.

The first volume includes two series of articles of a general nature intended to serve as an introduction to the later sections of the work, in which topics are treated in alphabetical order, as in ordinary encyclopedias. The first series of comprehensive introductory articles deals with such topics as "What Are the Social Sciences?" "Greek Culture and Thought," "The Growth of Autonomy," "The Rise of Liberalism," and "The Trend to Internationalism." The second series of introductory articles treats of the social sciences as developed in the different civilized countries where these sciences have been cultivated. The articles dealing with Italy and Russia are perhaps the most interesting of these national surveys because of the recent development of radically new social doctrines and practices in these countries. The article on the United States surveys the rapid growth of the social sciences in this country in recent years.

The alphabetical topics which are included in the first volume give a clear idea of the scope of the whole work. There are biographies of leading contributors to the social sciences and references to sources of materials on the various topics treated. The student of education finds in his field such topics as "Aca-

<sup>1</sup> *Encyclopaedia of the Social Sciences*, Volume I. New York: Macmillan Co., 1930.

demic Freedom," "Adolescence," and "Agricultural Education." Perhaps it is more important in order to promote a wider interest in social phenomena to call the attention of students of education to the fact that in this and later volumes they will find material which will help them to understand what is being discussed in other fields, such as economics, sociology, anthropology, and political science.

The encyclopedia promises to be a book of reference and also a means of co-ordinating the social sciences.

CHARLES H. JUDD

*Problems in public-school administration.*—School enrolments and expenditures have increased so rapidly in the last few years that today education may be considered one of the most important businesses in the country. The administration and management of this business require the services of many individuals properly trained in handling the problems which arise in the administration of local school systems. These problems are discussed in a recent book<sup>1</sup> by Ward G. Reeder, of the Ohio State University, who says, "Although the business phases of school administration have not been neglected in the book, the larger emphasis has been devoted to the problems of educational administration" (p. vii).

The author points out that school administration does not exist as an end in itself but as a means of arriving at an end, namely, the facilitation of education without financial waste. In serving as a means of arriving at this end, school administration has several functions, which are enumerated in the first chapter of the book. The remainder of the book, with the exception of a chapter dealing with the organization and duties of the board of education and another dealing with the professional status of school administration, is devoted to a discussion of the functions of administration. These functions are discussed as problems of administration, and the discussion deals with such subjects as the following: the method of selecting teachers; the training of teachers; measuring the efficiency of teachers; budget-making; planning, constructing, and financing school buildings; the school janitor; the administration of school supplies; classification and progress of pupils; measuring pupil achievement and ability; health supervision and medical inspection; administration of extracurriculum activities; making a curriculum; school accounting; and public relations, or publicity.

The book has four noteworthy features. (1) Wide use is made of existing studies in the field of administration to supplement the author's own ideas, although the studies are not evaluated. (2) Frequent references are made to present practices as revealed by the reports of superintendents and school boards. (3) Many sample forms are included which should prove of value to

<sup>1</sup> Ward G. Reeder, *The Fundamentals of Public School Administration*. New York: Macmillan Co., 1930. Pp. xii+580. \$2.25.

administrators. (4) Each chapter is supplemented by a rather complete annotated bibliography containing references pertinent to the material discussed in the chapter.

The book should prove helpful to the student who desires to become acquainted with the problems of public-school administration and to administrative officers who desire information regarding present practices in school administration.

LEE O. GARBER

*Where social work and education merge.*—More than twenty years have elapsed since visiting teachers were first employed in the public schools. In that time the knowledge and methods of the educator, the social worker, and the mental hygienist have developed so rapidly that the task of the visiting teacher has become more clearly defined and understood. In 1925 a book written by Mary B. Sayles with an introduction by Howard W. Nudd was published by the Joint Committee on Methods of Preventing Delinquency under the title of *The Problem Child in School*. This book contained accounts of a selected group of authenticated cases of problem children and described the outcome of the methods employed by visiting teachers in their efforts to readjust the children. The profession has now developed to such a point that a statement of the work of the visiting teacher is desirable. Such a statement has appeared in a book<sup>1</sup> by Jane F. Culbert published by the Commonwealth Fund.

The content of the book is presented in two parts and a series of appendixes. Part I is devoted to the work of the visiting teacher with the child. Chapter i summarizes the types of problems encountered among school children and outlines appropriate procedures for handling the problems. Chapter ii presents a working classification of the assets and liabilities in the home situation which influence the adjustment of the child, while chapter iii makes a similar analysis of community factors.

Part II deals with the professional standards and relations of the visiting teacher. Chapter iv discusses the visiting teacher's relations with various members of the school staff; chapter v presents a similar discussion of the relation of the visiting teacher to the administration; chapter vi details suggestions concerning records and the interpretation of the work, while chapter vii gives advice with regard to professional preparation for those contemplating entering this occupation. Ten appendixes present forms, case records, and various devices for aiding the visiting teacher in the details of her work.

The interpretation of the work of the visiting teacher presented in this book is "based specifically upon the experience and carefully accumulated data of visiting teachers in thirty communities specially selected for demonstrations of the work under varied economic and industrial conditions in different parts

<sup>1</sup> Jane F. Culbert, *The Visiting Teacher at Work*. New York: Commonwealth Fund, 1929. Pp. xvi+236. \$1.50.

of the country" (p. v). These thirty demonstrations were conducted for a period of three years and provided a wealth of material upon which the author could draw in the presentation of her discussion. Constant references to case studies, specific techniques, summaries of data, and record forms give the impression that here is an excellent, usable, and non-technical presentation of the visiting teacher at work.

The book will be of particular interest to administrators, personnel officers, social workers, and mental hygienists. It is the best single handbook of occupational information dealing with the task of the visiting teacher, and it will educate the sympathies of any person concerned with the stimulation and control of the growth of healthy boys and girls. It is one more manifestation of the enlightened insight into the educative process which has been developed by recent scientific advances in the fields of dynamic psychology and educational psychiatry.

HOWARD YALE MCCLUSKY

UNIVERSITY OF MICHIGAN

*Attaining physical fitness.*—Good health means more than mere freedom from illness. It presumes, in addition, the ability to carry on work and play with the maximum of vigor and enjoyment. It involves, also, the maintenance of a reserve of energy that can be tapped when needed. On the other hand, building up physical fitness will at the same time increase a person's resistance to disease. How is one to decide when the peak of physical fitness has been attained? The diagnosis of the presence of disease does not offer great difficulty, although the discovery of the exact nature of the disease sometimes is a knotty problem. It is a matter of importance to be able to determine when one is really well. A recent book<sup>1</sup> has been written for the purpose of showing the individual how to rate himself on his physical fitness, health intelligence, and health habits.

The first chapters are devoted to a discussion of the signs of good health, special stress being laid on the interpretation of weight as compared with the averages given in a height-weight-age table. In several chapters are given detailed facts concerning health habits and ways of establishing good habits. Common-sense rules for building physical fitness are listed. The book also describes the organization of large-scale health programs for schools and communities.

The giving of regular physical examinations for the detection of physical defects has received added impetus in the last decade. In many schools the children are examined completely once or twice a year. Such examinations are valuable, but it is even more productive to build good health in order to prevent the occurrence of physical defects. The diagnosis of health is, therefore, more important than the diagnosis of disease.

Teachers, parents, and others interested in the promulgation of health will

<sup>1</sup> William R. P. Emerson, *The Diagnosis of Health*. New York: D. Appleton & Co., 1930. Pp. xiv+272. \$3.00.

find in Dr. Emerson's book a guide for their efforts that will lead them in the right direction. The student in college or university can derive sufficient knowledge from this book to start him on the road to good health.

WILLIAM J. FISHBEIN, M.D.

*The technique of teaching biology.*—The old method of presenting biology from day to day, from page to page, from a single textbook is rapidly passing. No longer is a certain number of pages assigned to be read at home in the evening and recited on at school the next day. The course is laid out in units with definite objectives to be attained. A work plan is placed in the hands of the pupils, which furnishes them with something definite and specific to work on at all times. A biology workbook<sup>1</sup> the fundamental aim of which is to give boys and girls an opportunity to secure valuable life-experiences has recently been published.

The workbook is so planned that it can be used with any standard textbook. It is desirable, however, to provide several different textbooks for reference material.

Some of the outstanding features of the workbook are:

1. There are sixteen units, each with a challenging title, such as "What To Eat To Have Energy, Vigor, and Vitality"; "Fads and Facts about Gaining and Reducing"; "How Food May Make Your Body a Beautiful Castle or a Miserable Hovel"; "Life an Adjustment: How We Become Acquainted with the World about Us"; "Biology and Wealth"; "Why Do Children Look Like Their Parents?" "Biology for Leisure Time"; and "Great Men in Biology."
2. At the beginning of each unit is either a list of eight or ten exploratory questions or a full-page illustration directing attention to the unit. Both the questions and the illustrations give evidence of careful thought.
3. There are eighty-seven well-planned experiments.
4. At the end of each unit are reading and study references to ten leading textbooks in biology, questions for study, and words for spelling and use.
5. The book is profusely illustrated with excellent drawings and photographs.
6. The pages are perforated for removal, and each page contains three ring holes.
7. The book is of ample size ( $7\frac{1}{2}$  by  $8\frac{1}{2}$  inches).

The plan of the book provides for individual differences. Biology is difficult for some pupils because they cannot draw. For these, diagrams are provided which they can identify and label. For those who are gifted in drawing, blank pages are provided. By the contract plan each pupil can progress at his own rate. From the abundance of material, the teacher can select that which best suits his needs.

O. D. FRANK

<sup>1</sup> James C. Adell, Orra Olive Dunham, and Louis E. Welton, *A Biology Workbook*. Boston: Ginn & Co., 1929. Pp. vi+326. \$1.32.

*Modern theories in a textbook in beginning chemistry.*—Chemistry in industry is rapidly achieving an important place in the modern world. The present era has even been referred to as the "Age of Chemistry." It is essential that the training of high-school pupils should include as much of the modern thought in the field of chemistry as has become established and as can be economically mastered by the pupils.

An unfortunate factor in curriculum-building is the assumption that the best methods in use by adults today are the practices which should be taught to our pupils. This assumption is often not correct; civilization moves on, and the training acquired may be out of date by the time the pupil is in a position to make use of it. In the case of chemistry this difficulty can be avoided to some extent by introducing the pupils in the high-school courses to the recently-developed but well-established principles of this foundation science. The established results of chemical research are the foundations on which rest nearly all modern industries. Discoveries made today are utilized in industry tomorrow. Proper contacts for high-school pupils can be arranged so that, through the mastery of recently-discovered fundamental principles, the pupils will be in position to understand and appreciate the industrial applications of these principles in the future.

Too often new textbooks in chemistry are conservative and relegate all recently-established theories to a few "optional" chapters at the end of the book. These chapters, apparently, are added as an afterthought and are to be studied if time permits. Usually they are not reached in the course. Modern chemists are explaining many fundamental principles on the basis of recently-established theories. The proper place to introduce these new theories is directly in connection with the various phenomena which they help to explain.

A commendable use of this type of organization appears in a recent textbook,<sup>1</sup> which introduces these new concepts early and makes excellent use of them throughout the later discussions. The book, not being large, is not an encyclopedia containing much unnecessary material. It is complete in covering all the material suggested in the syllabus prepared by the American Chemical Society and is a satisfactory guide for a good course in high-school chemistry because it covers all the requirements of the College Entrance Examination Board.

The authors consciously planned a gradual approach to the subject. High-school pupils often find the study of chemistry difficult because it is a new field in which they are abruptly confronted with entirely strange concepts and unfamiliar situations. The first six chapters lead the pupils by easy stages from those things with which they are familiar to the new ideas necessarily included in this highly-organized special science. These chapters are very short, perhaps too short, as it is essential that the pupils be well prepared for the new ideas.

The new theories are then introduced so that they may be used in the later discussions. Chapter vii deals with the electron theory applied to the structure

<sup>1</sup> Gustav L. Fletcher, Herbert O. Smith, and Benjamin Harrow, *Beginning Chemistry*. Chicago: American Book Co., 1929. Pp. viii+476. \$1.60.

of matter. Only the essential features of the theory are discussed, and the explanations are made so clear that the pupil will have little difficulty in mastering the desired concept. This material is followed by chapters dealing with the explanation of chemical changes, the chemical behavior of atoms, and the meaning of valence. All these discussions are based on the theory of the electronic structure of matter. Other modern ideas introduced and used in the book are the new theories of ionization, a more complete law of mass action, an explanation of isotopes, a discussion of the activity of colloids, and a discussion of the electrolytic refining of metals. Of especial value is a chapter explaining oxidation and reduction reactions in terms of electron shifts.

Near the end of the book is a section of two chapters, "Carbon Compounds" and "The Chemistry of Food," which constitutes an excellent introduction to organic chemistry—a phase of the subject too often slighted in many otherwise good textbooks. The last four chapters are called supplementary chapters by the authors and discuss the most recent applications of chemistry in the newer industries. In this section we find descriptions of explosives, photographic processes, and the chemical significance of paints and inks.

The organization of the book is well suited to good teaching practice. Appropriate illustrations are profusely distributed throughout the book. Optional paragraphs are found at the ends of chapters, and many optional questions are included for the purpose of challenging the thought of the brighter pupils. At the end of the book in tabular form is to be found an excellent summary of laboratory procedures, including drawings of apparatus, equations, lists of the materials used, etc. The Appendix contains all necessary tables usually found in textbooks in high-school chemistry and, in addition, several lists of materials which will be found most valuable.

The progressive teacher who wishes to introduce the newest developments in modern chemistry and at the same time give a sound and complete course will gratefully accept this book and appreciate its value.

FRED G. ANIBAL

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*A scientifically graded French reader.—Si nous lisons*<sup>1</sup> is the third book in the Chicago French Series published under the editorship of Otto F. Bond. This new publication is the reading text to accompany Helen M. Eddy's *Beginning French* and is the first reader of the West type to appear in this country. It is planned for use in connection with a grammar almost from the beginning of the course, that is, immediately after the pupils have acquired some ability in pronouncing French. Using sixteen words as the initial vocabulary, the authors have undertaken to create reading material in which the vocabulary, idioms, and forms are scientifically graded. The materials are selected, introduced, and repeated according to a definite system. The vocabulary is based on

<sup>1</sup> Grace Cochran and Helen M. Eddy, *Si nous lisons*. Chicago: University of Chicago Press, 1929. Pp. xvi+192. \$1.35.

words in the first quarter of the *French Word Book* by George E. Vander Beke and the *French Idiom List* compiled by Frederic D. Cheydeur. The book is planned so that each chapter or story follows a chapter or story in *Beginning French*.

The procedure of starting with so small a vocabulary allows but small scope for the creation of reading material. Consequently, the first pages are given over to such sentences about the class and the pupils as are usually found in a grammar. This material is soon worked into an elementary story about two American boys who are visiting Paris. Mention is made of the Louvre, the Tuilleries, Jeanne d'Arc, etc. While the boys say that stories about the people whom they discuss and the places which they visit are to be found in their books, the stories do not appear in this book. The reviewer thinks that this omission might prove annoying to a pupil, particularly to a young one. While the boys are visiting in Normandy, their hostess tells them stories. This arrangement gives the authors the opportunity to use the old stand-bys: "Les trois ours," "Les trois souhaits," and "Les douze mois." At this point in the book, the younger boy returns to America, and the older boy goes to a French school where he reads the remaining stories in the book: adaptations of "Le chien de brisquet," "Boum-boum," "La pièce de cinq francs," "La cloche," "Lilith," and "La jument bleue."

Each chapter or story is followed by exercises dealing with the content and with word study, which stress word-building, vocabulary development, and the relation between French and English. A good deal of space is devoted to a study of the French element in English. Other exercises consist of multiple-choice and completion exercises, true-false statements, and questions on the text. At the end of each chapter there are also suggested readings in English with regard to places mentioned in the text. At the back of the book there is a bibliography of forty-two English titles for supplementary reading about France and French life. The provision of such a bibliography is a particularly good idea, one that could be used more frequently to enrich and broaden a pupil's understanding of the country whose language he is studying. The pupils themselves might considerably extend such a list.

Three folk songs with music and a traditional Christmas song appear at the end of the book. The vocabulary contains all the words and idioms in the text. A table of the proper nouns is given with phonetic transcriptions and geographical notes, as well as a table, with phonetic transcriptions, of French and English words that are similar.

By the time the pupil has read the last story, he is expected to have a vocabulary of 850 French words. Occasionally, a word not included in the word count is used in a story, the English equivalent being given in parentheses. This arrangement sometimes leads the author into a procedure that is certainly not flattering to the intelligence of the pupil. Between pages 56 and 58, the word *saucisse*, which is explained in English the first time it is used, occurs sixteen times and is one of the key words of the story. When the same word again ap-

pears on page 110 in another story, its meaning is again given in English. Likewise, in "*Les douze mois*" the words *fraises* and *janvier*, both key words, are explained in English in the story and again when they are used in the questions based on the story. Unnecessary explanations of other words are also given.

The book offers an interesting contribution to the reading program that is everywhere being stressed at present. The book is the result of a serious effort to provide reading matter that may be used early in the course to build up reading ability. It is attractive in form and does not look like a schoolbook. The proof-reading, on the whole, has been carefully done. However, on page 24 and again in the bibliography the surname of Mortimer Menpes is given as "Mempes."

JOSETTE EUGÉNIE SPINK

#### CURRENT PUBLICATIONS RECEIVED

##### GENERAL EDUCATIONAL METHOD, HISTORY, THEORY, AND PRACTICE

BETZNER, JEAN. *Content and Form of Original Compositions Dictated by Children from Five to Eight Years of Age*. Teachers College Contributions to Education, No. 442. New York: Teachers College, Columbia University, 1930. Pp. vi+54. \$1.50.

BLAISDELL, THOMAS C. *Ways To Teach English*. Garden City, New York: Doubleday, Doran & Co., Inc., 1930. Pp. x+566. \$2.50.

BLOM, EDWARD CHARLES. *Radio and Electric Power Supply Equipment for Schools*. Teachers College Contributions to Education, No. 409. New York: Teachers College, Columbia University, 1930. Pp. vi+188. \$2.00.

BONSER, FREDERICK GORDON. *Industrial Arts for Public School Administrators*. New York: Teachers College, Columbia University, 1930. Pp. vi+96.

BRINK, WILLIAM G. *Direction and Coördination of Supervision: Current Practices of City Superintendents*. Northwestern University Contributions to Education, School of Education Series, No. 3. Bloomington, Illinois: Public School Publishing Co., 1930. Pp. xiv+118. \$1.50.

DELONG, LEO RAY. *City School Institutes in Pennsylvania: A Study of the Development and Administration of the Problem of In-Service Education of Teachers with Proposals for Improved State Control and Local Administration*. Camp Hill, Pennsylvania: Ell. Ess. Dee. Educational Publishers, 1930. Pp. xii+146.

GRAY, HOWARD A. *Some Factors in the Undergraduate Careers of Young College Students with Particular Reference to Columbia and Barnard Colleges*. Teachers College Contributions to Education, No. 437. New York: Teachers College, Columbia University, 1930. Pp. 66. \$1.50.

HARTLEY, HELENE WILLEY. *Tests of the Interpretative Reading of Poetry for Teachers of English*. Teachers College Contributions to Education, No. 433. New York: Teachers College, Columbia University, 1930. Pp. vi+48. \$1.50.

HASSLER, JASPER O., and SMITH, ROLLAND R. *The Teaching of Secondary Mathematics*. New York: Macmillan Co., 1930. Pp. xii+406. \$2.50.

HUGHES, J. M., and MELBY, E. O. *Supervision of Instruction in High School: A Study of Techniques and Organization*. Northwestern University Contributions to Education, School of Education Series, No. 4. Bloomington, Illinois: Public School Publishing Co., 1930. Pp. xvi+192. \$1.50.

JENKINS, LULU MARIE. *A Comparative Study of Motor Achievements of Children of Five, Six, and Seven Years of Age*. Teachers College Contributions to Education, No. 414. New York: Teachers College, Columbia University, 1930. Pp. x+54. \$1.50.

KYTE, GEORGE C. *How To Supervise: A Guide to Educational Principles and Progressive Practices of Educational Supervision*. Boston: Houghton Mifflin Co., 1930. Pp. xvi+468.

LEONARD, EUGENIE ANDRUSS. *Concerning Our Girls and What They Tell Us: A Study of Some Phases of the Confidential Relationship of Mothers and Adolescent Daughters*. Teachers College Contributions to Education, No. 430. New York: Teachers College, Columbia University, 1930. Pp. vi+192. \$2.00.

LORGE, IRVING. *Influence of Regularly Interpolated Time Intervals upon Subsequent Learning*. Teachers College Contributions to Education, No. 438. New York: Teachers College, Columbia University, 1930. Pp. 58.

MCGOWAN, ELLEN BEERS. *A Comparative Study of Detergents with Special Reference to the Teaching of the Subject*. Teachers College Contributions to Education, No. 441. New York: Teachers College, Columbia University, 1930. Pp. vi+126. \$1.50.

MADSEN, I. N. *Educational Measurement in the Elementary Grades*. Yonkers-on-Hudson, New York: World Book Co., 1930. Pp. x+294. \$2.00.

MEAD, ARTHUR RAYMOND. *Supervised Student-Teaching*. Richmond, Virginia: Johnson Publishing Co., 1930. Pp. xxii+892. \$3.00.

MEIER, LOIS. *Natural Science Education in the German Elementary Schools*. Teachers College Contributions to Education, No. 445. New York: Teachers College, Columbia University, 1930. Pp. vi+158. \$1.75.

MENDENHALL, JAMES E. *An Analysis of Spelling Errors: A Study of Factors Associated with Word Difficulty*. New York: Lincoln School of Teachers College, Columbia University, 1930. Pp. vi+66.

*An Outlook on Education*. Collected Addresses of Robert Josselyn Leonard. New York: Teachers College, Columbia University, 1930. Pp. viii+178.

PULLIAM, ROSCOE. *Extra-Instructional Activities of the Teacher*. Garden City, New York: Doubleday, Doran & Co., Inc., 1930. Pp. vi+460.

RANKIN, MARJORIE. *Trends in Educational Occupations: An Examination of the Waxing and Waning Occupations in the Public School Systems of Certain Cities in the United States from 1898 to 1928*. Teachers College Contributions to Education, No. 412. New York: Teachers College, Columbia University, 1930. Pp. 84. \$1.50.

REISNER, EDWARD H. *The Evolution of the Common School*. New York: Macmillan Co., 1930. Pp. x+590. \$2.25.

*Reports on European Education* by John Griscom, Victor Cousin, and Calvin E. Stowe. Edited by Edgar W. Knight. New York: McGraw-Hill Book Co., Inc., 1930. Pp. 320. \$2.25.

ROBINSON, CLARA L. *Psychology and the Preparation of the Teacher for the Elementary School: A Survey and an Analysis of Practices in the Teaching of Psychology in Certain Professional Schools for the Preparation of Teachers*. Teachers College Contributions to Education, No. 418. New York: Teachers College, Columbia University, 1930. Pp. vi+122. \$1.50.

*School Health Progress as Recorded at the Fifth Health Education Conference Arranged by the American Child Health Association and Held at Sayville, Long Island, June 17-22, 1929*. New York: American Child Health Association (370 Seventh Avenue), 1930. Pp. 344. \$1.25.

SMITH, HARVEY A. *Economy in Public School Fire Insurance*. Teachers College Contributions to Education, No. 428. New York: Teachers College, Columbia University, 1930. Pp. vi+114. \$1.50.

STORM, GRACE E., and SMITH, NILA B. *Reading Activities in the Primary Grades*. Boston: Ginn & Co., 1930. Pp. viii+376. \$2.00.

STOVER, WEBSTER SCHULTZ. *Alumni Stimulation by the American College President*. Teachers College Contributions to Education, No. 432. New York: Teachers College, Columbia University, 1930. Pp. 128. \$1.50.

THOMPSON, ROBERT S. *The Effectiveness of Modern Spelling Instruction*. Teachers College Contributions to Education, No. 436. New York: Teachers College, Columbia University, 1930. Pp. 82. \$1.50.

WILLIAMS, JESSE FEIRING, and BROWNELL, CLIFFORD LEE. *Health and Physical Education for Public School Administrators (Elementary Schools)*. New York: Teachers College, Columbia University, 1930. Pp. x+118.

#### BOOKS PRIMARILY FOR HIGH-SCHOOL TEACHERS AND PUPILS

BAROJA, Pío. *Las inquietudes de Shanti Andía*. Edited with Introduction, Notes, and Vocabulary by Laurence D. Bailiff and Maro Beath Jones. Chicago: University of Chicago Press, 1930. Pp. xii+222. \$1.50.

BROWN, CARLOTTA M. *Millinery Processes*. Boston: Ginn & Co., 1930. Pp. viii+188. \$1.60.

BRUBACHER, ABRAM ROYER, and WHEELING, KATHERINE ELEANOR. *High School Composition and Grammar*, Book One. New York: Charles E. Merrill Co., 1930. Pp. xii+478.

CLARK, F. LESLIE. *Progress Tests in American History*: Teachers Handbook. New York: Charles Scribner's Sons, 1930. Pp. 276. \$0.60.

COESTER, ALFRED. *A Year of Spanish*. Boston: Ginn & Co., 1930. Pp. xii+354. \$1.48.

CRAWFORD, CLAUDE C. *Studying the Major Subjects*. Los Angeles, California. C.C. Crawford (University of Southern California), 1930. Pp. xiv+384. \$2.00.

CRAWFORD, CLAUDE C., and LEITZELL, EDNA MABLE. *Learning a New Language*. Los Angeles, California: C. C. Crawford (University of Southern California), 1930. Pp. xii+242. \$2.00.

FISHBACK, ELVIN HOLT, and KIRKPATRICK, EDWIN A. *Conduct Problems for Junior-High-School Grades*. Boston: D. C. Heath & Co., 1930. Pp. iv+60.

500 Books for the Senior High School Library. Compiled by Meta Schmidt. Chicago: American Library Association, 1930. Pp. 64. \$0.75.

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